

ROBSON SQUARE



Architecture is a kind of language. It, too,
binds us to a system.

—ARTHUR C. ERICKSON, Hawaii, 1963

ROBSON SQUARE

by
ANN ROSENBERG

EDITOR
DOROTHY JANTZEN

The Capilano Review is published four times a year from Capilano College, 2055 Purcell Way, North Vancouver, British Columbia, Canada V7J 3H5.

We gratefully acknowledge the assistance of The Canada Council, the Capilano College Humanities Division, the Government of British Columbia through the B.C. Cultural Fund and Lottery revenues.

The Capilano Review is a member of the Canadian Periodical Publishers' Association and COSMEP. Microfilm editions and reprints are available from University Microfilms International, Ann Arbor, Michigan.

We are always pleased to receive good material, especially from artists we haven't published before, but we cannot take responsibility for unsolicited manuscripts. Manuscripts should be submitted to the Editor, and must be accompanied by a self-addressed envelope and Canadian postage to ensure return.

Printed in Victoria, British Columbia, by Morriss Printing Company Ltd.

Second Class Registration Number 4593

ISSN 0315-3754

THE CAPILANO REVIEW

Number 40

1986

CONTENTS

Preface	4
The Old Courthouse	8
Introduction	8
The Dome	19
Other Technical Aspects	23
Between the Old Courthouse and the New	30
The New Law Courts	37
Introduction	37
The Glass Roof	49
Other Technical Aspects	58
The Old Courthouse Conversion	66
Introduction	66
The Rotunda	77
Other Technical Aspects	82
A Walk Through Robson Square	90
A Concrete Poem	118
Acknowledgements	128

COVER Jan Koot

PREFACE

In 1865 Edward Stamp established a sawmill at False Creek which became the basis for a small community built east of Main Street.¹ Another Englishman, John Deighton, arrived two years later to erect a saloon at the intersection of Water and Carrall, streets that were soon lined with workers' lodgings. This area of the original settlement was dubbed Gastown, a reference to the loquaciousness of "Gassy" Jack Deighton, whom some regarded as its unofficial mayor.²

In 1870 Stamp's enterprise was sold and renamed Hastings Mill. In that same year the townsite was surveyed and officially named Granville. Granville was still small and unprosperous in 1885 when a visitor described it in this fashion:

... to reach this place of about 150 inhabitants, the traveller was obliged to disembark at a wharf near Hastings Mill, about a half a mile east of the village. ... This place has been surveyed ... and a few lots sold. But so little was thought of its situation and prospects that only about thirteen lots had been purchased.³

By 1886, Granville's future was ensured by the Canadian Pacific Railway's decision to extend its cross-Canada line to the coast. Granville was incorporated that April as the City of Vancouver, and described as a place of 2,000 inhabitants and 8,000 businesses. In June came the devastating fire which destroyed much of the city. But the rebuilding took place quickly. One journalist marvelled that he had "never seen so much enterprise amid so much desolation." He reported that, by July, "fourteen new hotels and hundreds of stores" (qtd. in Ormsby 297) had been constructed.

This rapid rebuilding was a reflection of the optimism that was felt about Vancouver's future. The hastily constructed wooden false-fronts in Gastown were soon replaced by brick structures in the Italianate style.

Whereas Granville's fortune had been tied to the mill, Vancouver's would be linked to Canadian Pacific Railway investment. In the summer of 1886, the CPR opened up and graded Cordova, Hastings, and Pender Streets; in 1887, Granville Street was opened from Burrard Inlet to False Creek. The first passenger train arrived that May. In June, Vancouver was tested as a deep-sea port. Because of its association with transportation, Vancouver was referred to as Terminal City. In 1887, its population was 5,000.



By 1889 Vancouver was a city of contrasts. One traveller observed that “one lot would have a grand grey granite building built in the primitive Romanesque style, costing 100,000 dollars; and the next, a wretched wooden shanty or a bit of the original bush” (qtd. in Ormsby 300). Between 1888 and 1890, however, Vancouver began to enjoy the amenities of city life — wooden paving, waterworks, sewerage, telephones and trams on the one hand; newspapers, dramatic societies and Stanley Park on the other.

But in 1900 Vancouver had a low population of 27,000 citizens and the appearance of a village. There were few buildings on a large scale and none exceeded five storeys. In the early years of the century (1904-1907), Vancouver experienced a boom. Eastern Canadian and Western European capital spurred the development of British Columbia’s mineral, lumber and fishing resources, and Vancouver plunged into land speculation and construction (Kloppenborg 49). Whereas in 1902 the city Building Inspector’s office issued only 417 permits for structures estimated at 33,609 dollars, in 1910 it issued 2,260 permits for projects totalling 13,150,360 dollars.

By 1913 the population had soared to 115,000. Between 1905 and 1920, dozens of substantial buildings with classical ornaments were constructed on West Hastings and West Pender, and on and about Granville Street, establishing a new commercial centre west of Gastown. Two of the grandest of these edifices, the Dominion Building on West Hastings and the Sun Tower on West Pender, were each in turn briefly proclaimed the "tallest building in the Dominion" (Kalman). One of the most imposing was the Courthouse which was designed by Francis Mawson Rattenbury, a leading architect of his day.

Today in 1986, the City of Vancouver's population exceeds 417,900 and that of the Greater Vancouver Regional District stands at over 1,233,000. The visual appearance of the commercial core has undergone radical transformation since the early century. The streets to the west of Granville (particularly Burrard) have been intensively developed since 1969. Curtain wall skyscrapers cluster around the classical buildings that remain from Vancouver's first period of maturity.

Rattenbury's Courthouse, however, still stands at the centre of things, its external appearance belying the changes that have occurred within. It has been recently renovated to become the new premises for the Vancouver Art Gallery, which opened in 1983. It is now part of an elaborate three block long complex called Robson Square, which contains a new courthouse, a government office block, a media centre, a food fair, a park and other amenities. This complex was designed by Arthur Erickson Architects. Arthur Charles Erickson is a leading architect of this day.

The Capilano Review has chosen to publish *Robson Square* in the year of Vancouver's Centennial not simply to document the work of two major architects, but as a celebration of the changing tastes and

methods the buildings in the Square (and their histories) suggest. In the last eighty years, architects have, on the whole, moved away from the practice of incorporating borrowed, traditional, hand-crafted ornament into their designs. While the borrowing of ideas and motifs still occurs, the typical approach to architectural aesthetics in the post-Bauhaus period is one that supports, in general, the notion that if the form of the building truly grows from its function, and if it is rendered in materials that are sensitively chosen and arranged, the result may be no less satisfactory than was the Doric temple. Some architects, like Erickson, manage to obey these general dicta and yet produce works in a highly personal style.

Further, in the last eighty years engineering has changed, and certain materials, like concrete, glass and steel, have, on the whole, replaced hand-hewn stone and brick. The bearing wall has been replaced by internal support, allowing structures with diaphanous coverings like the vast curtain wall that serves as the ceiling and main wall of Erickson's Law Courts. In the past, gardens used to surround structures, but today in the best works are integral to them.

NOTES

- ¹ For historical facts regarding British Columbia's history to 1958 consult Ormsby, *British Columbia: A History*.
- ² For basic information about Vancouver's history and for images of extant buildings consult Kalman, *Exploring Vancouver*.
- ³ For a well illustrated book full of quotations consult Kloppenborg et al., *Vancouver's First Century*. The passage reproduced here is quoted on page 8.

IMAGE

PAGE

5 City of Vancouver Archives.

THE OLD COURTHOUSE

Introduction

On February 10, 1906, F. C. Gamble, Public Works Engineer of British Columbia's Lands and Surveys Department, invited architects to submit competitive designs for a courthouse in Vancouver that would replace one no longer deemed adequate.¹ The "accommodations" were to include:

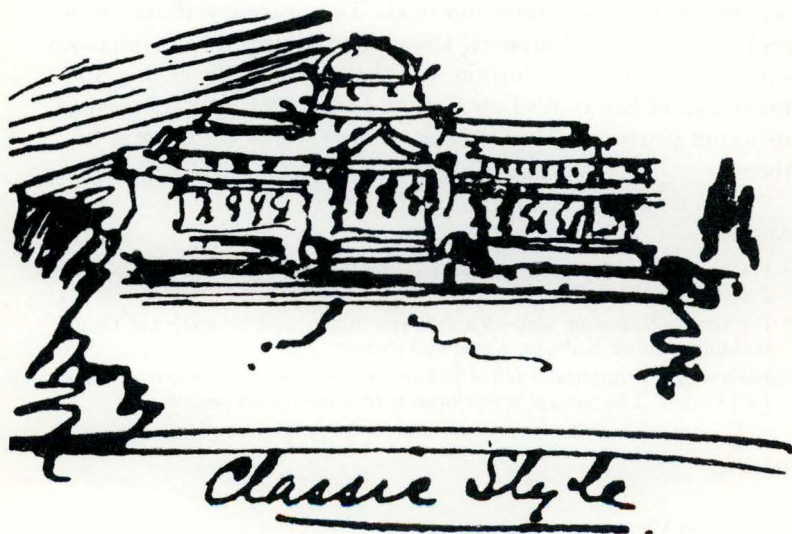
- (1) Boiler Room (2) Police Department (3) Six Cells (4) Timber Agent's Office (5) Assessor and Collector's Office (6) Agriculture Department (7) Assize Court (8) Full Court...

Twenty-six areas in all were specified.

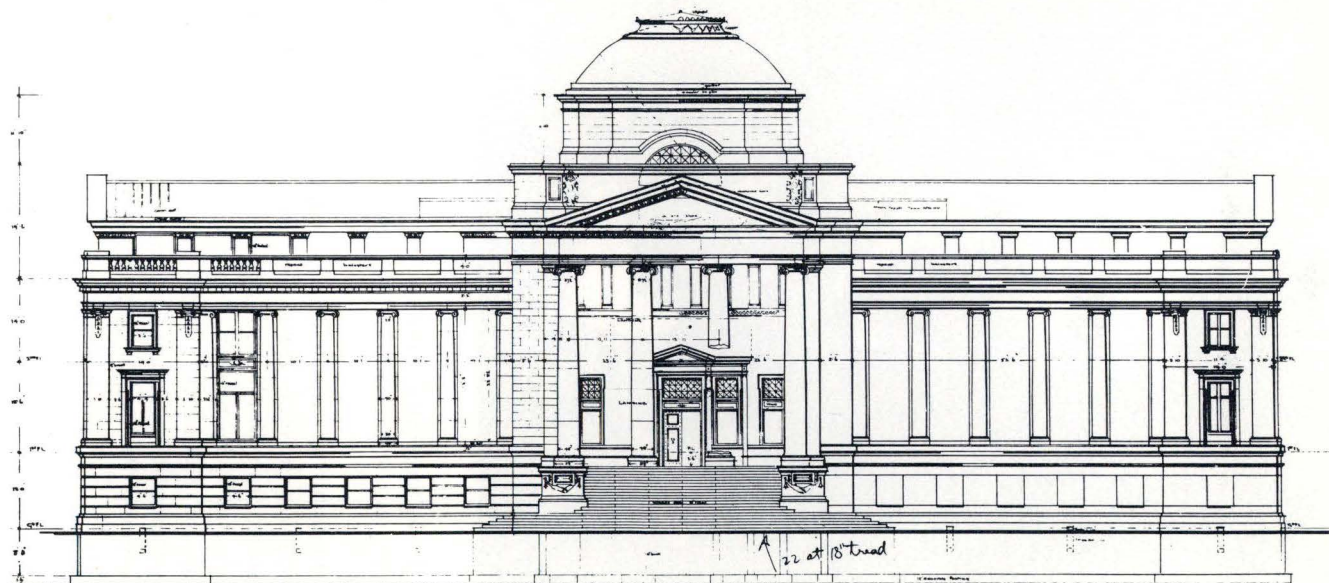
The competition invitation recommended that the Land Registry Office be a fireproof annex on one side of the building, that the corresponding annex on the other side not be directly connected with the courts, and that the design of the building as a whole should facilitate later additions.

On May 10, 1906, Gamble received this telegram from Edmund Burke, representing the Toronto-based judges:

CANNOT GIVE FIRST OR SECOND PLACE TO OTHER DESIGNS.
FAULTS TOO SERIOUS... HAVE NEW COMPETITION OR
ENGAGE NUMBER 4.



COURT HOUSE.
VANCOUVER. N^o 10



ELEVATION TO GEORGIA ST

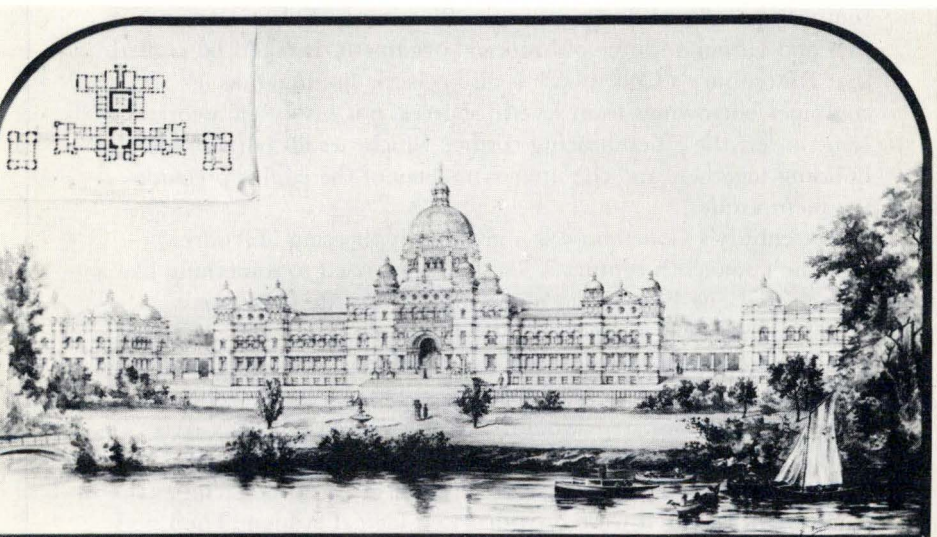
SCALE OF FEET

J.M. Ramezany Architect
Victoria B.C.
April 1909



Number 4 was the "classic" design submitted by Francis Rattenbury, one he had sketched for his mother and described as "swagger."²

It was probably no surprise that Francis Mawson Rattenbury (1867-1935) was chosen to create the Vancouver Courthouse. He had emigrated from Bradford, England in 1892, after apprenticing with a firm run by his mother's brothers which was known, principally, for the Italianate buildings it constructed. He moved then to Victoria after winning the competition for the design of the British Columbia Parliament buildings in 1893 at the young age of twenty-five. He had also recently completed the Empress Hotel and BC Government House (Cary Castle) in Victoria and was working on the Courthouse for Nelson.³



His colleagues may have been surprised at the Classicism of his design for the Vancouver Courthouse, at odds with the best-known of his early works. But with sophistication, they would have judged his choice of style as Rattenbury's shrewd reflection of the current taste in public buildings, one that was thought to be both "modern" and "cosmopolitan" (Whiteway et al.). At the time, Renaissance

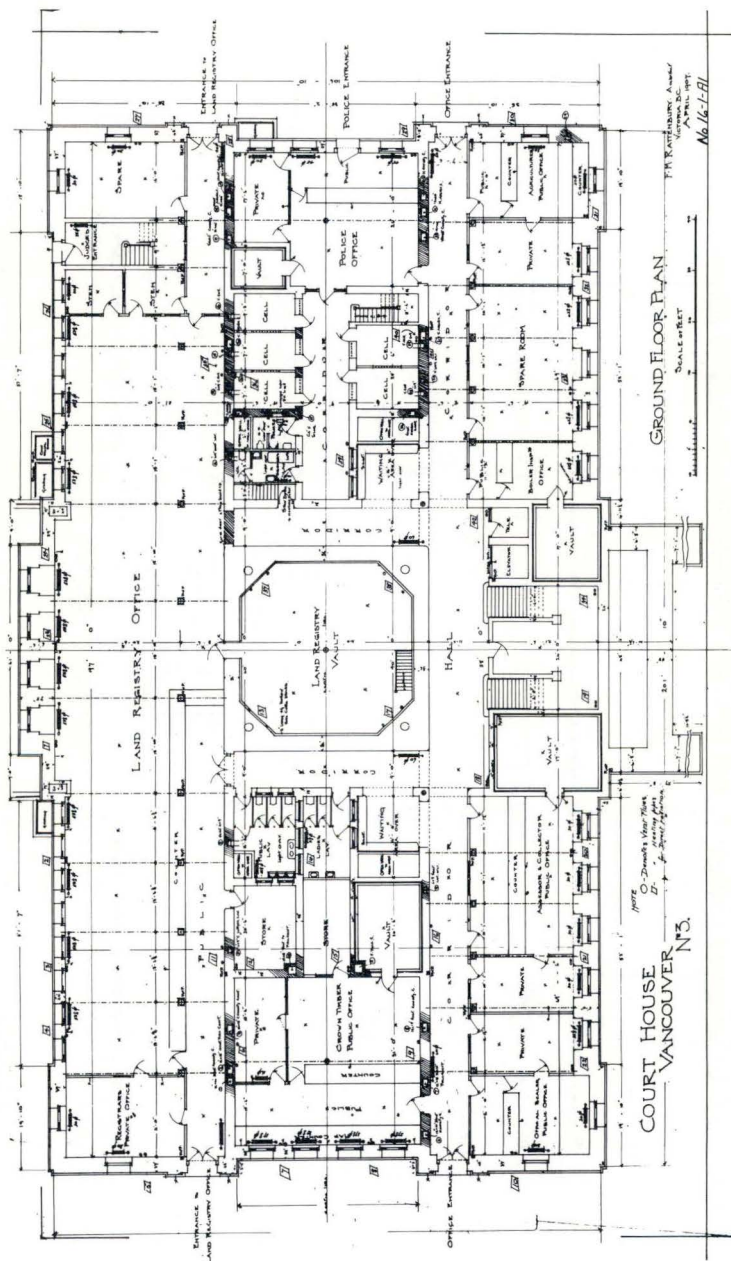
Classicism was experiencing a return to popularity, in part because of the several structures in this manner that had been created for The Chicago World's Fair in 1893, but more especially because one firm (McKim, Mead and White) was producing dozens of buildings with classical detail which influenced other architects.

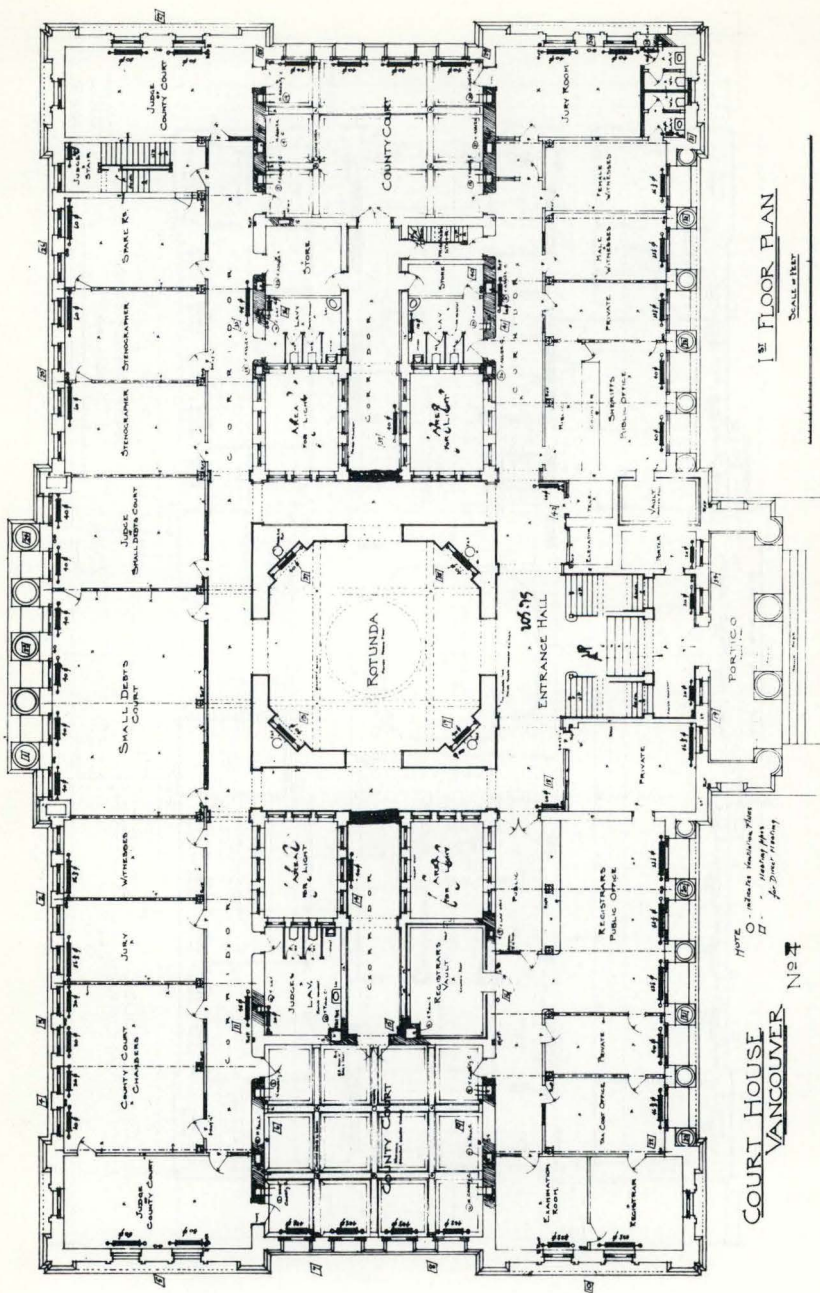
To imitate the Classical (Renaissance or other) was to break away from the Medieval, the historical period which in the previous century had offered designers in the Picturesque Eclectic manner so rich and varied a source of historical ornament. It could be argued that Rattenbury's Courthouse is also eclectic inasmuch as it combines borrowings from several sources, but his use of a correct Ionic order, the all-embracing cornice which ties all parts of his building together, and the utter symmetry of the edifice preclude the picturesque.

Rattenbury's Courthouse is a graceful rephrasing of Andrea Palladio's sixteenth-century Villa Capra married to something like a French Baroque Palace and made suitable for the law court's requirements, or it is a sister to Washington's White House, dome added on top. In any event, it is richly allusive and was fashionable. The special swags he ordered for its facades and the lions he had carved for the front steps would make Rattenbury's Beaux-Arts exercise seem original.

As the plan of the ground floor suggests, most of the facilities the commission required were provided in a logical fashion. The Land Registry vault, which was ultimately located at the centre, however, was here the underpinning of a grand entry hall to which one gained access after climbing the tall stairway of the Georgia Street entrance. At the first storey level, this in turn was the lowest level of something more grand — a domed Rotunda which was the major circulation area, inner light well, and aesthetic highlight of the building, a simpler version of Rattenbury's successful BC Parliament Building foyer. There is little discrepancy between Rattenbury's original designs and what was finally executed. The original layout has been described in this fashion:

Beyond the fine entrance a short flight of stairs led up to the hall and the rotunda; on either side stairs descended to the ground floor, reached directly from street level at the rear. The ground floor contained the various government offices, chiefly the Land Registry office and the Police Department, while the lower ground floor was reserved for cells,







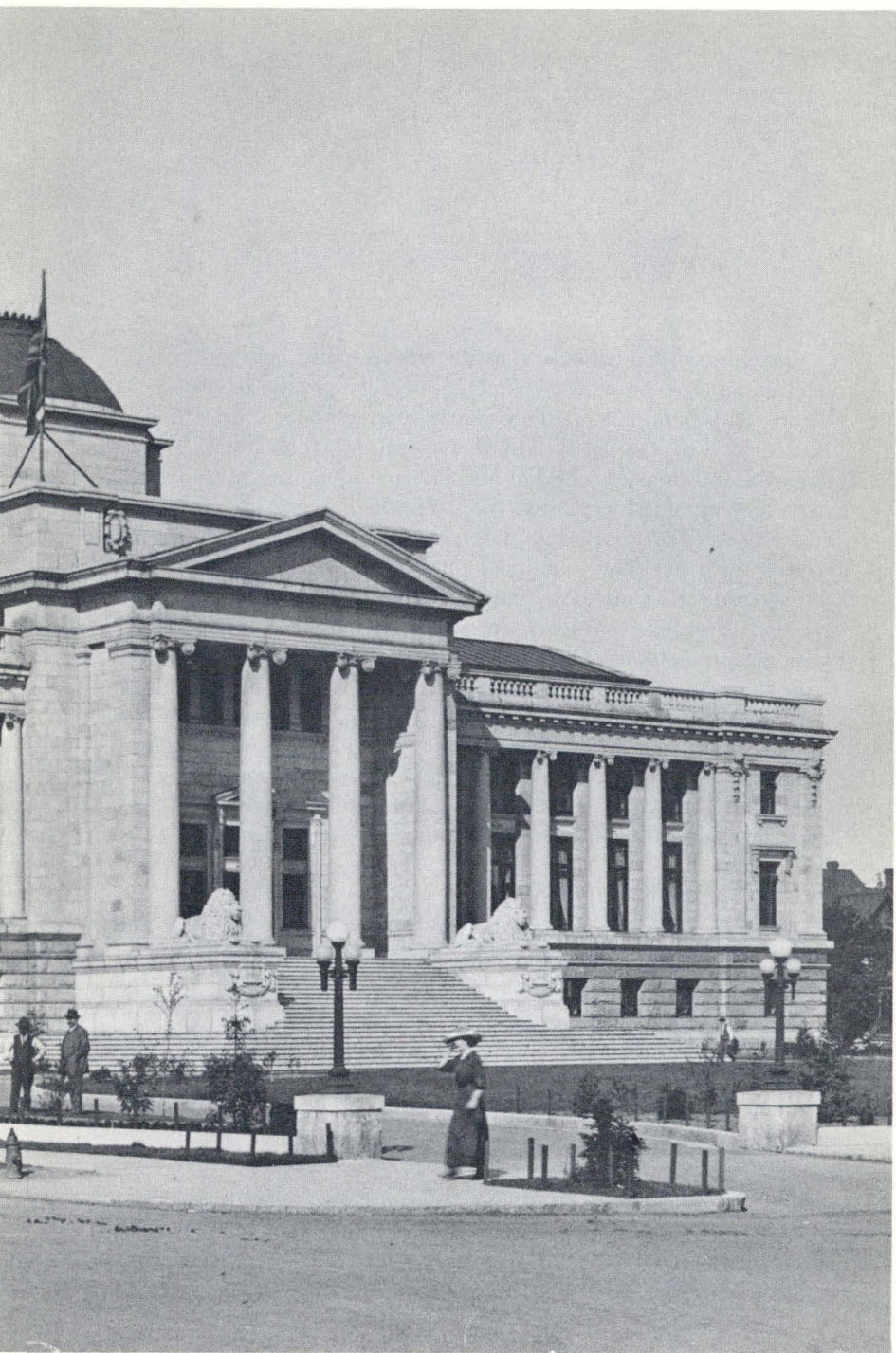
heating pumps for the ventilating and vacuum cleaning systems, and the electrical apparatus. From the entrance hall two further flights supported the upper part of the rotunda. At this level the four sides of the rotunda were decorated with tall pilasters enclosing columns and supporting a continuous entablature, perhaps in emulation of the Roman triumphal arch and thus intended to symbolize the triumph of justice through law. (Barret et al. 173)

The court rooms were disposed on either side of the Rotunda at three levels, and, also on either side of it, Rattenbury provided separate entrances for the public, the law officers and the litigants and prisoners.

The plans and drawings reproduced here were prepared as adjuncts to a May 7, 1907 document called Specification for a Court House, Vancouver, BC, prepared by the Provincial Government. This manual, which contained detailed instructions for contractors and workmen, announced that the work would begin on July 1, 1907 and finish on or before July 1, 1909. It stated that the entire work was to be executed in conformity with the drawings, specifications and details Rattenbury had prepared. As it progressed the Courthouse project would be supervised by Dalton & Everleigh, Architects of Vancouver.

This document, archive photographs, and letters make it possible to present a very intricate picture of the Courthouse's metamorphosis from idea to fact. A City of Vancouver Archive photo shows workers breaking ground with horse teams. A 1908 illustration in a magazine of the period (*Westward Ho*., June 1908) depicts the granite basement in progress.





Rattenbury's Courthouse is at the change point between traditional and contemporary technique. The granite basement was walled with hand-cut masonry and supported walls of limestone that bore a good deal of the weight of the structure. The swags, the Ionic capitals, and the rich external and internal mouldings were hand-carved or moulded in plaster; the lions which guard the major stairway were the work of a sculptor. On the other hand, references to structural steel and reinforced concrete in Specification and the letters bring the Courthouse into the context of modern structural methods. Iron cage construction, ferro-concrete fireproofing, and wire glass, mentioned and used by Rattenbury and his assistants at various stages of construction, were new at the turn of the century. Although the Courthouse was begun in 1907, it was not completed until 1910, nor was it built within the estimated cost of 150,000 dollars. The arguments over the dome's methods of construction are not only interesting in themselves, but also indicate why then, as now, few buildings can be finished efficiently and on budget.

NOTES

- ¹ For documents, including those cited here, pertaining to the history of the Old Courthouse design competition, consult the Provincial Archives of British Columbia, in Victoria, BC.
- ² For a full and readable text which combines history and architectural history consult Barret and Liscombe, *Francis Rattenbury and British Columbia*.
- ³ For further information about Rattenbury's architecture and scandalous end consult Reksten.

IMAGES

PAGE

- | | |
|---------|--|
| 8 | UBC Press. |
| 9 | Provincial Archives of British Columbia. |
| 10 & 11 | Sono Nis Press. |
| 13 & 14 | Provincial Archives of British Columbia. |
| 16 & 17 | City of Vancouver Archives. |

The Dome

The difficulties that attended the construction of Rattenbury's dome — which delayed the building's completion date and contributed to the escalation in cost — began with the fact that Specification was short on detail.¹ It stated that the

whole of the dome is to be rendered in and finished in Keen's polished [marble] in the best manner, except only to the four large wall panels. . . .

The domed ceiling and large cornice will be furred out in concrete by the Fireproofers. . . .

The plasterer should examine the Fireproofing Specification carefully. . . .

It said the dome was to be executed in concrete to "the thickness shewn on Plan" and strongly reinforced. Unlike other parts of the roof, it was not to be covered entirely with copper.

In July 1908, the Vancouver architects in charge of Rattenbury's project wrote to F. C. Gamble, their government supervisor, that the capping of the rotunda was about to proceed:

We have made tracings of the necessary drawings which the contractors are forwarding to Portland, Ore. to prepare complete details for dome which will be submitted to your department as soon as possible.

Contractors will also submit details for floor of gallery over inner dome for which no detail is shewn on contract steel work drawings.

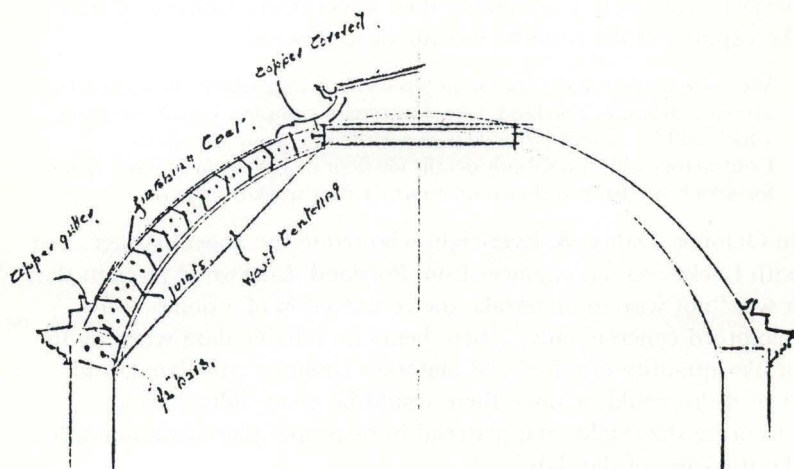
In October, Dalton & Everleigh, who wrote the above passage, met with Lockwood, an engineer from Portland. Lockwood thought that it was "not wise to undertake the construction of a dome . . . in reinforced concrete only," there being no reliable data whereby the proper quantity of reinforced materials could be calculated, and even if this could be done there would be great difficulty in "securing the reinforcing material in its proper place in relation to the thickness of the slab."

Dalton & Everleigh then requested Lockwood to "prepare a proper plan of light steel upon which a layer of reinforcing fabric could be stretched to receive the concrete, the reinforcing material securely wired to the frame." A drawing for a metal cage was apparently sent to F. C. Gamble for approval. An accompanying letter stated that the steelwork would be made by North Western Bridge Company in Portland because John Coughlan and Company, who had supplied the rest of the steelwork in Vancouver, had "a shop not yet fully equipped for making curved work except by hand." Dalton & Everleigh wrote Gamble that Lockwood's opinion of how the work would be done corresponded with that of other engineers they had consulted. On October 28, the above information was sent along with the notification that a contract to erect the steel frame and dome had already been passed from Gamble's office to Rattenbury's.

According to the Specification document, Rattenbury had to be consulted whenever a deviation from or alteration in the plan occurred. His response was immediate and it eliminated the twenty ton metal cage. Rattenbury stated in his October 29 letter that:

the dome can be readily built as I have seen it done elsewhere, by erecting a centering, and carrying concrete up in consecutive courses 18" in height with $\frac{1}{2}$ " bars as reinforcing.²

He included this sketch as information:



He closed the letter with the remark that he did not foresee any difficulty with waterproofing even if the concrete of the main part of the dome was left exposed, but, if there was a problem, the whole could be sheathed in copper. He requested, finally, further information on the progress of the dome.

On November 3, 1908, Gamble wrote to Dalton & Everleigh that he thought Rattenbury's proposal was worth considering and that it was cheaper. But apparently the architects and their consultants did not agree to this method even after Rattenbury had stressed, in a letter dated December 2, that he had found that

it is possible to obtain qualified reinforced concrete Engineers and Contractors willing to execute and guarantee this work—It is only a question of cost.

By March 27, Dalton & Everleigh were proceeding with the Lockwood proposal; their reasons:

... we had the opportunity of discussing this question with the consulting engineer of American Steel and Wire Co. and are now more firmly convinced that in a public building, no chances should be taken, or experiments made with a doubtful method. ... We therefore strongly advise the acceptance of Messrs. MacDonald Wilson and Snider's tender of \$3750.00... and request that you [Gamble] grant an order for this extra expenditure.

This letter included the statement that the steel work could be done in Coughlan's local shop, but that the curved ribs would still have to be made elsewhere. On March 30, 1910, Dalton & Everleigh requested that the Honourable Mr. Taylor send additional funds to cover the cost of copper to sheathe the entire dome in order to ensure waterproofing.

On March 26, this remarkable request came from Gamble's office:

It has been suggested before building the permanent dome that we should erect a temporary one, so that the effect [from Georgia Street] can be seen before the work is carried out. Kindly see the contractors and ask them to make an estimate of the cost.

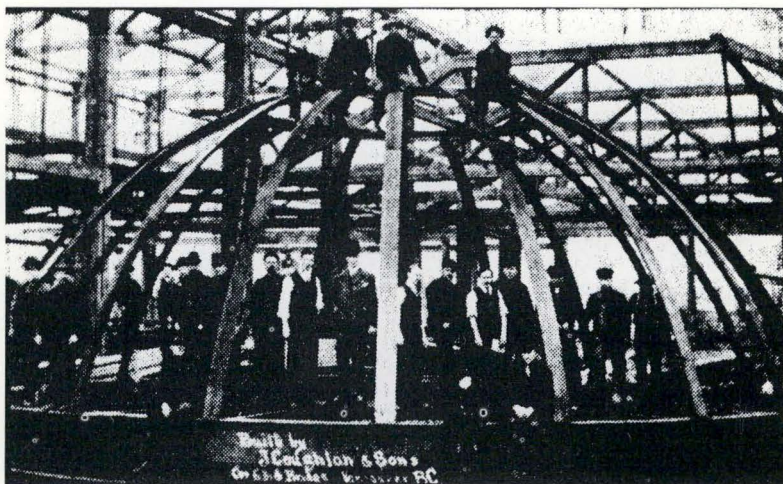
Dalton & Everleigh's reply on March 30 set

the cost of putting up a temporary frame and two ribs to give the outline of the dome at about one hundred and fifty dollars.

On working out the view line from Georgia Street, we are of the opinion that it will take from about five to eight feet extra masonry according to whether you take the north or the south side of the street as the point of view.

At the height as shown in the drawings, only the cornice below the spring of the dome will be seen from the street.

By April, contractors were at work facilitating this visual amendment for which the government was sent a bill of 4,600 dollars for "extra work in all the trades . . . the cost of the stone and brickwork taken at a higher [than usual rate] owing to the cost of handling materials at this height." On April 25, Dalton & Everleigh were forwarding estimates for the ninety feet of "lead and wire" glass necessary for the dome's fireproofing, and so the project was near completion. It is an amusing historical fact that by the time the dome was erected, J. Couglen & Sons had the capability of constructing its inner metal cage.



NOTES

- ¹ Specification for a Court House is available at the City of Vancouver Archives. Hofar's previous Courthouse, located at Victory Square, is illustrated on p. 36.
- ² For the letters, etc. referred to in this section consult the Provincial Archives of British Columbia, in Victoria, BC.

IMAGES

PAGE

- 20 Provincial Archives of British Columbia.
22 City of Vancouver Archives.

Other Technical Aspects

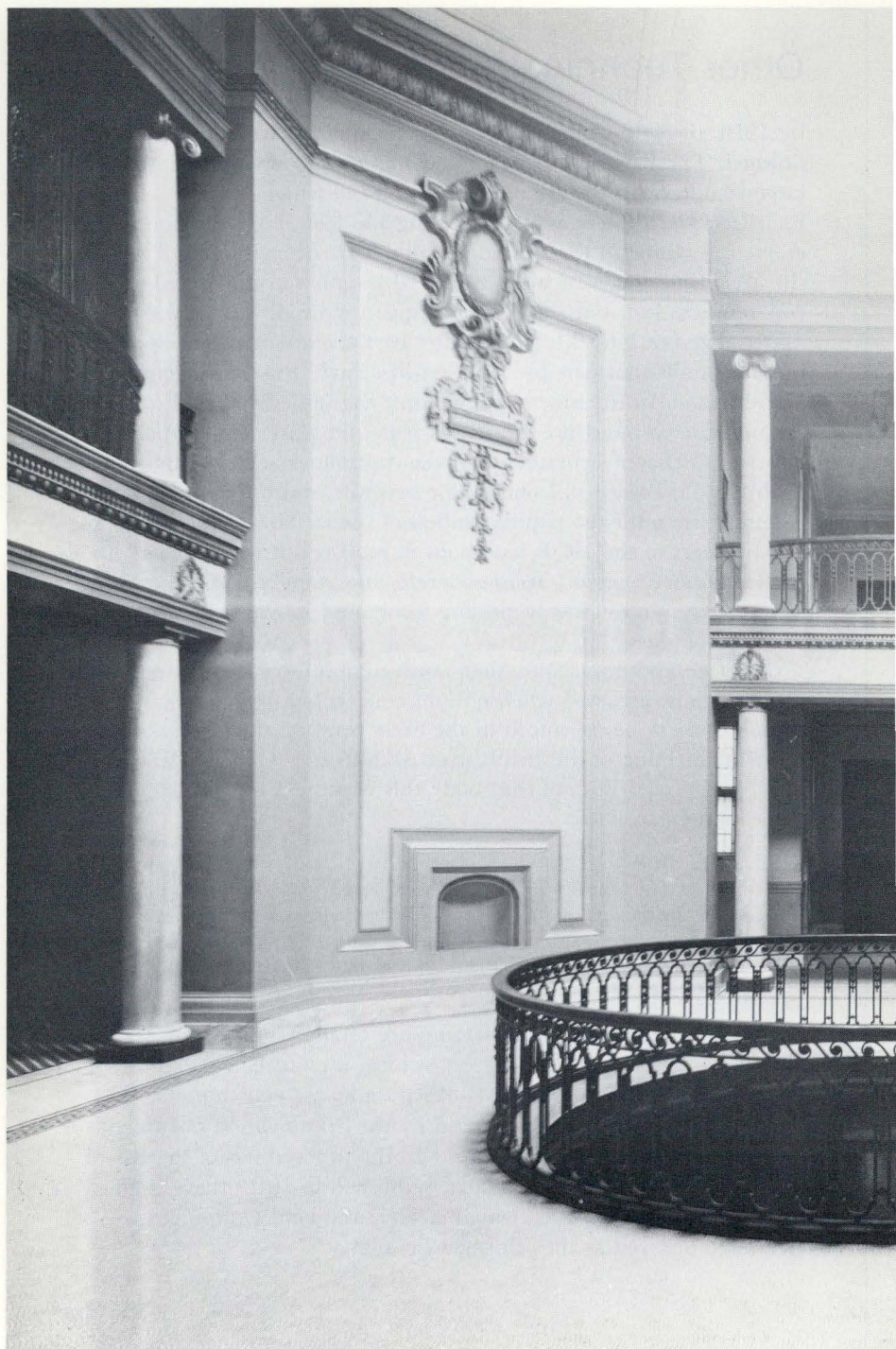
By 1910, the Old Courthouse and its problematical dome were finished. The Romans, using similar methods, constructed much larger vaults than this, the most beautiful of which is the Pantheon's—146 feet across, hovering 146 feet above the floor—erected in Rome in the second century A.D. After the fall of Rome the art of building vast unencumbered interiors in reinforced concrete was lost, but the desire for gigantic inside spaces was materialized in later Medieval times by the elaborate, rib-supported masonry roofs that canopy churches like Paris' thirteenth century Notre Dame. In the nineteenth century the same Medieval architecture inspired pre-fabricated iron and glass combinations in large and delicate structures. But the techniques achieved by the 1855 Crystal Palace in London, for example, did not come into common use until the popularization of the curtain wall by Bauhaus practitioners in the 1920s took hold in most countries by the 1940s. In Rattenbury's period, ferro-concrete construction was the exciting re-discovery, and it was beginning to be used in consort with large windows of glass.

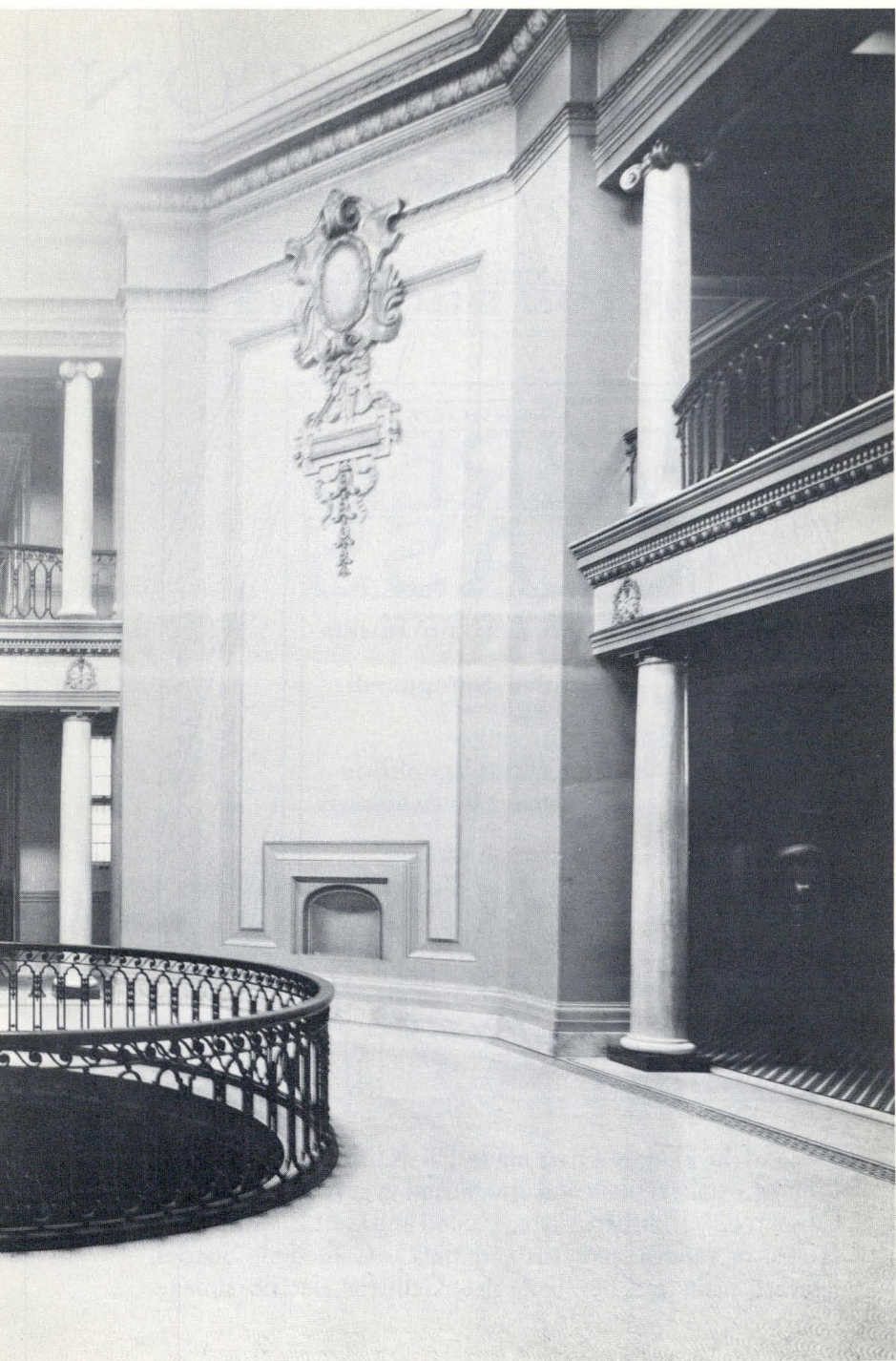
Concrete and iron alone, then concrete reinforced with steel, were the materials discussed when notions concerning fireproofing standards were being voiced in the early century at, for example, the 1907 meeting of the Institute of Architects of Canada. In the published proceedings of that body this argument for public protection was voiced:

Since fire is the chief destroyer of property, virtually the most contagious of diseases, everything should be done to stop the growth and destruction wrot [sic] by this plague. . . . To prevent destruction a building must perforce be indestructable; to not burn it must be indestructable; to not burn it must be incombustible, and not to be damaged it must be fireproof. (*First* 66)

Given Vancouver's own devastating fire of 1886, such deliberations must have been of special interest to local architects, and, as mentioned earlier, certain parts of Rattenbury's courthouse, including the dome, were required by the Specification document to incorporate fireproofing measures.¹ In the proceedings of the Royal Architectural Institute of Canada, published in 1910, there is an illustration for wired glass which is likely the kind Dalton & Everleigh ordered as they finished the dome.

* * *





PILKINGTON

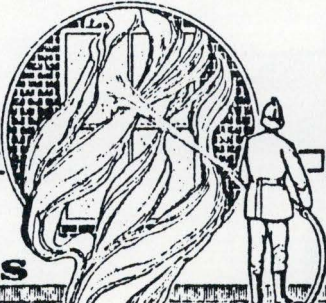


FIREPROOF

WIRED GLASS

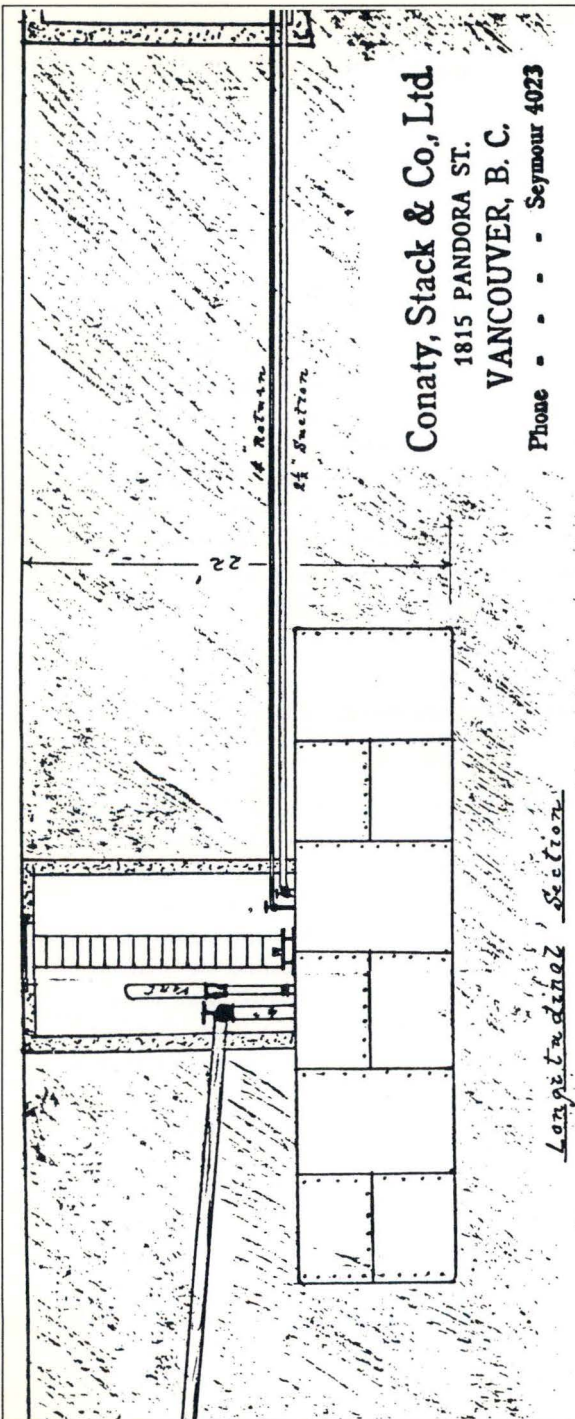
Made in Three Varieties
CAST · ROLLED · POLISHED ·

**A Positive Safeguard
 against
 Spread of Fire
 Injury from Breakage
 Burglars & Housebreakers**



St. Helens **Lancs.**

Some of the kinds of Glass made PILKINGTON BROS., Limited,—Sheet plain and ornamental in several thicknesses, Obscured. Polished Plate, Rolled and Cast Plate, figured. Rolled in various patterns and tints. Cathedral, Shades, Mirrors plain and bevelled, also Cells for electric storage.



Conaty, Stack & Co., Ltd.
1815 PANDORA ST.
VANCOUVER, B. C.

Phone . . . - Seymour 4023

PROPOSED FUEL OIL INSTALLATION

for
VANCOUVER COURT HOUSE

Scale $\frac{1}{8}" = 1ft.$

In Specification, it is stated that it was the duty of Rattenbury's delegates to check the quality of cement from time to time. Supervision of the steel quality was the job of the contractor; supervision of fireproofing standards was the business of the sub-contractor. Then, as now, a chain of authority and contracts ensured that a building met contemporary standards for public safety.

In Rattenbury's day, the quality of cement was tested in the following way. The contractor had to supply a sample whenever the architect requested it. No fewer than six pounds of the material were taken from each delivery and thoroughly mixed with fresh water at 60 to 70 degrees Fahrenheit to see if the concrete was of proper quality. If it was not, "the cements of such brands" were rejected and all work done in "such cements" was removed. Steel would be considered acceptable to the contractor only if it had been made by the Bessimer or open-hearth method and did not contain more than 0.08 per cent of phosphorous nor more than 0.06 per cent of sulphur. Further, according to Specification, it had to meet these requirements:

Ultimate tensile strength 60,000 to 68,000 lbs. per square inch. Elastic limit not less than one-half the ultimate strength. Elongation not less than 20 per cent in 8 inches. Reduction in area not less than 40 per cent at point of fracture. . . .

Fireproof floors, walls and ceilings (as required in the basement, the heating and fuel cellars, the freight elevator pit, the small vaults of the ground floor, and elsewhere) were made of reinforced concrete in "Renobling, Expanded metal or Franklin system of fireproofing." Every structural steel member had to be protected thoroughly by steel mesh and concrete. The "Fireproof Floor Contractor" had to submit his plans for all aspects of his specialized work, and, when finished, he had to guarantee that the floors could withstand a test of 800 pounds per square inch. The nature of the loading for such a test, its location and its duration would be the choice of the architect. The floors, however, had to be tested thirty days after the concrete was poured.

These details are included to demonstrate that any building (and in particular a public building) must respond to the government controlled rules deemed fitting at the time of its creation. Similar data will be supplied for some aspects of the standards that were to be met and some testing that took place during the construction of Erickson's New Law Courts.

Finally, every piece of architecture, especially one conceived on a large scale, has to be concerned with the mechanical systems that bring heat, light, ventilation and plumbing to the structure. In the early century, windows could be opened and shut at whim and doors opened or closed in order to help regulate the temperature. The heating unit of Rattenbury's court was proposed in this initial sketch provided by Conaty, Stack & Co. Ltd. An early design for the ventilation of the New Law Courts can be studied in a sketch in that section of this monograph. It takes into account the fact that all but the major entries to this building will be, according to contemporary custom, sealed and that, unusually, the heat will be regulated by the vast tank of water in the basement and by careful choice of tinted glass in the gigantic roof.

NOTE

¹ For details concerning these tests, consult the City of Vancouver Archives.

IMAGES

PAGE

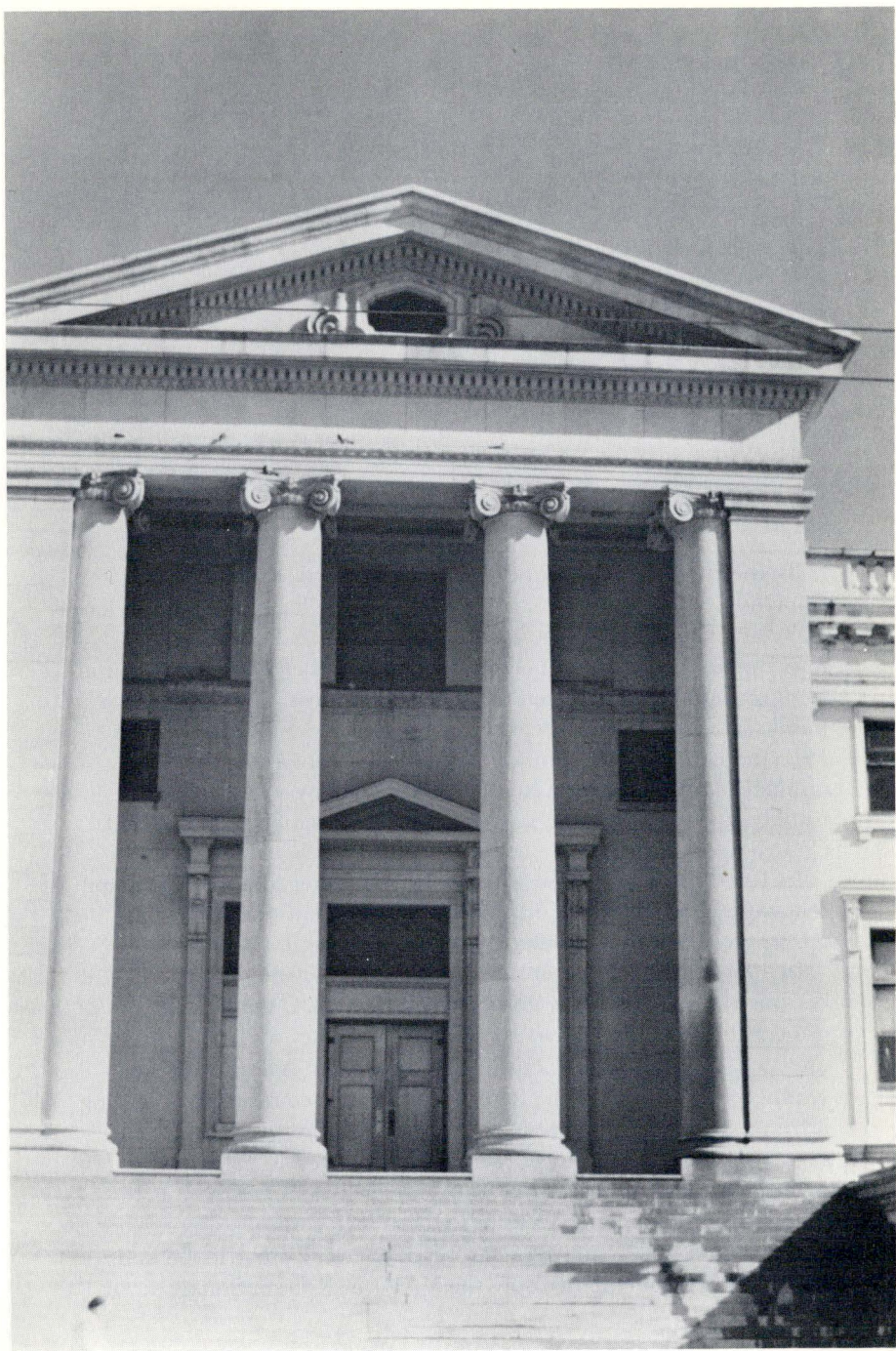
24 & 25 City of Vancouver Archives.

26 & 27 Provincial Archives of British Columbia.

BETWEEN THE OLD COURTHOUSE AND THE NEW

In the years 1907 to 1911, while Rattenbury's Courthouse was under construction, Vancouver's population had doubled to 100,000. The building was finished at a cost greatly exceeding its 150,000 dollar budget, and this increase was largely the result of the inflation that accompanied the boom. At the same time, the population spurt caused an increase in litigation which rendered the Courthouse inadequate at the date of its opening (Barret et al. 173-174).

In 1906 Rattenbury had proposed that, in such an eventuality, the government offices be moved to detached wings or to two storey additions built onto the sides of the building. "Rather than adopt either solution, the government commissioned Rattenbury's old foe, Thomas Hooper, to erect an extension on Hornby Street which was linked to his temple of justice by a somewhat disharmonious structure" (Barret et al. 173-174). The temple front Hooper designed for Robson Street, however, is a lovely rephrasing of the vocabulary Rattenbury had provided. This addition was complete by 1912, and contains some fine Classical rooms that remain in use today.



By the time the Hooper addition was finished, the site of the Courthouse had been discussed as the location for a civic centre for Vancouver, perhaps surrounded by a city hall, a library, art museum and auditorium ("From"). On the other hand, the lawn in front of the courts had been described in this period as one of two public spaces in Vancouver's business and residential district.¹ In 1912 the Edward VII fountain was placed at the centre of the original plaza on Georgia Street.² And for many years, until it rotted, the tallest flagpole in the Empire was the boast of the Old Courthouse square.³

In 1959, the Courthouse with its Hooper wing (despite additional renovations in 1952) was judged inadequate, and the provincial government considered adding another wing to it.

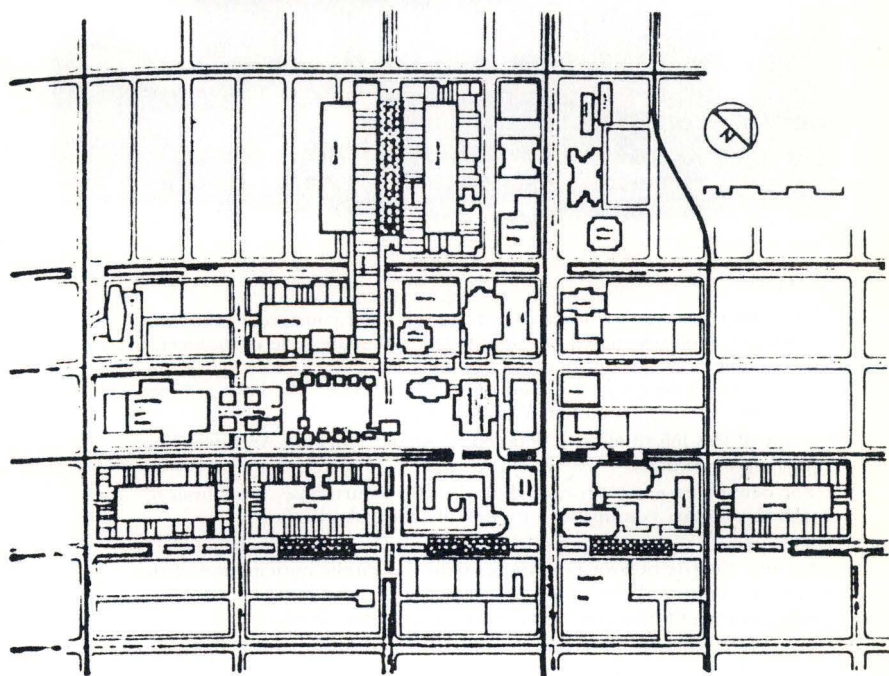
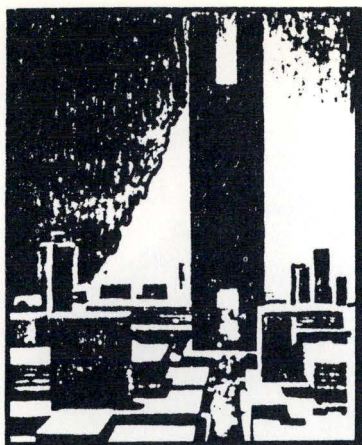
In 1966, the lawn in front of Rattenbury's facade on Georgia became the location for a grandiose fountain, a Canada Centennial project that was the province's gift to Vancouver and, until it was unveiled, a well-guarded 250,000 dollar secret.⁴ Apart from the symmetry of its design, the fountain took no account of the building it fronts. Its programme of nearly invisible figures carved into the stones is Celtic. The floor of the pool is rendered in colourful mosaics arranged in wave-like patterns.⁵ This fountain, it was thought, would become a "Bum's Roost." Its rush of water is welcome and anticipates now the three waterfalls that lie behind Rattenbury's Courthouse (now the VAG) in Robson Square.

* * *



Another Centennial project played an important part in the history of Robson Square. The Community Arts Council commissioned Erickson/Massey to conduct studies on the impact of potential development in the downtown core and the resulting impact on traffic patterns. The city was committed to building a civic centre, new court rooms were necessary, and a multi-purpose office block was likely to be built on Blocks 51 and 61, properties owned by the city and the province. Erickson/Massey suggested that, if a highrise was necessary, it should be dramatic. The photograph of the model reproduced here shows a drive-through skyscraper straddling the street.

Before the government buildings were actually commissioned, Premier W. A. C. Bennett, impressed with the new Bank of America building in Los Angeles, resolved to have a similar structure in the proposed complex. His concept of a fifty-five storey building relied on corporate co-sponsors; the Bank of British Columbia and BC Hydro, for example, were two corporations initially interested. Thompson, Berwick and Pratt and McCarter/Nairne were commissioned, but the multi-building complex did not enjoy strong community support (Nichols). In fact, when an election replaced Bennett's Social Credit Party government with Premier Dave Barrett's NDP government, there were not enough clients to fill the proposed highrise. Further, the city and the province disagreed about some aspects of the proposal, such as whose responsibility the cost of the required parking lots was, for example. Because of these problems, the province and, by coincidence, a now also newly elected city government (TEAM) reconferred. Block 71 was included, and the whole area was developed as a three-block complex called Robson Square.



2

Legend for all traffic

- Transit
- Service traffic
- One way streets east and south
- ▲ x ▢ One way streets west and north



NOTES

- ¹ The other one was the lawn in front of the older courthouse, the now-destroyed Hofar-designed building in the Italianate style reproduced here. This edifice's dome and porticos probably were consciously echoed in Rattenbury's design for his Vancouver Courthouse. The lawn referred to is now Victory Square off West Hastings.
- ² Some of this information is detailed in Arthur Erickson Architects' notes on Robson Square.
- ³ For newspaper clippings regarding the Old Courthouse, the fountain, and the square, consult the City of Vancouver Archives.
- ⁴ This project was surrounded by a hoarding for many months which became the site of a locally famous paint-in. Public anticipation of the fountain increased, but when it was unveiled, some thought it a disappointment and even a misspending of public funds.
- ⁵ For a full explanation of the fountain's iconography, consult the invitation to its unveiling in the City of Vancouver Archives.

IMAGES

PAGE

- 31 Ann Rosenberg.
- 33 Nathan Hohn.
- 35 Arthur Erickson Architects.
- 36 Vancouver Public Library Historical Photograph Collection.

THE NEW LAW COURTS

Introduction

Although the firm had been commissioned to start urban design studies in October 1972, it was not until February 16, 1973 that the local newspapers announced that Arthur C. Erickson (b. 1924) had been hired to prepare a report on the building or buildings and the impact on traffic flow of the newly proposed low-rise complex on Blocks 61 and 71 adjacent to the Block 51 Old Courthouse. This project, agreed to by the new city council, dominated by The Electors Action Movement Party, and sanctioned by the recently elected New Democratic Party Government of BC, was to supercede the now discarded Social Credit Party scheme for provincial government buildings on Blocks 51 and 61, a project that had included the unpopular fifty-five storey tower mentioned above.

The new scheme, unveiled on June 6, 1973, was substantially different from the earlier one, as Erickson's office had been asked to redesign it for three blocks instead of two.¹ The firm was to consider which services should be provided in the downtown core and which should be provided in the suburbs. The development had to include a civic centre, courtroom facilities, government offices, and public parking. The arguments upon which every aspect of the scheme is based are equally interesting, but, in order to make a pertinent contrast with Rattenbury's Courthouse, facts and ideas concerning the New Law Courts on Block 71 will be the focus here.

In the 1973 brief prepared by Erickson's office, the New Courthouse's function is summarized:

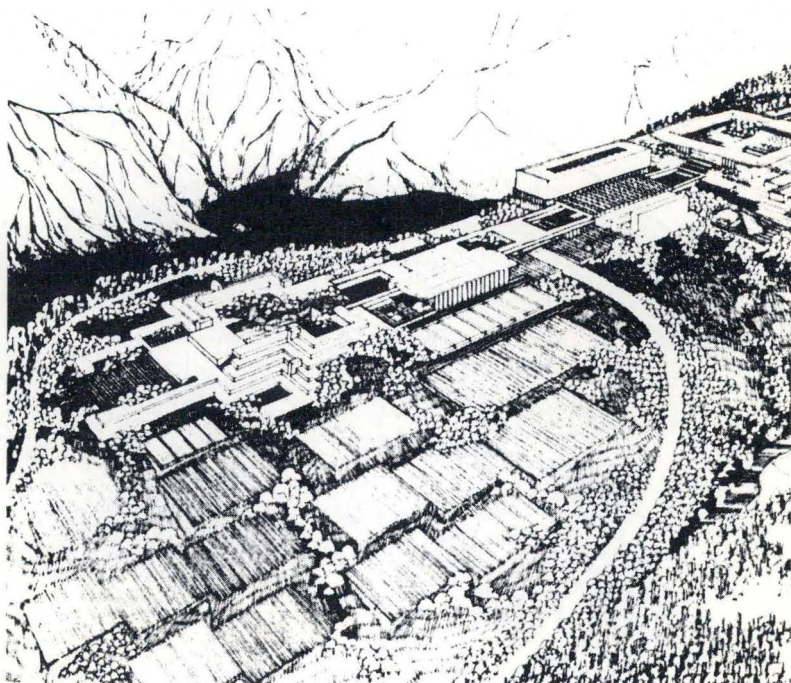
The law courts building is organized into four major components: public space, courtrooms and cores, judges' chambers, administrative and support facilities. These four major elements have been arranged so as to give considerable importance to the courtrooms themselves.

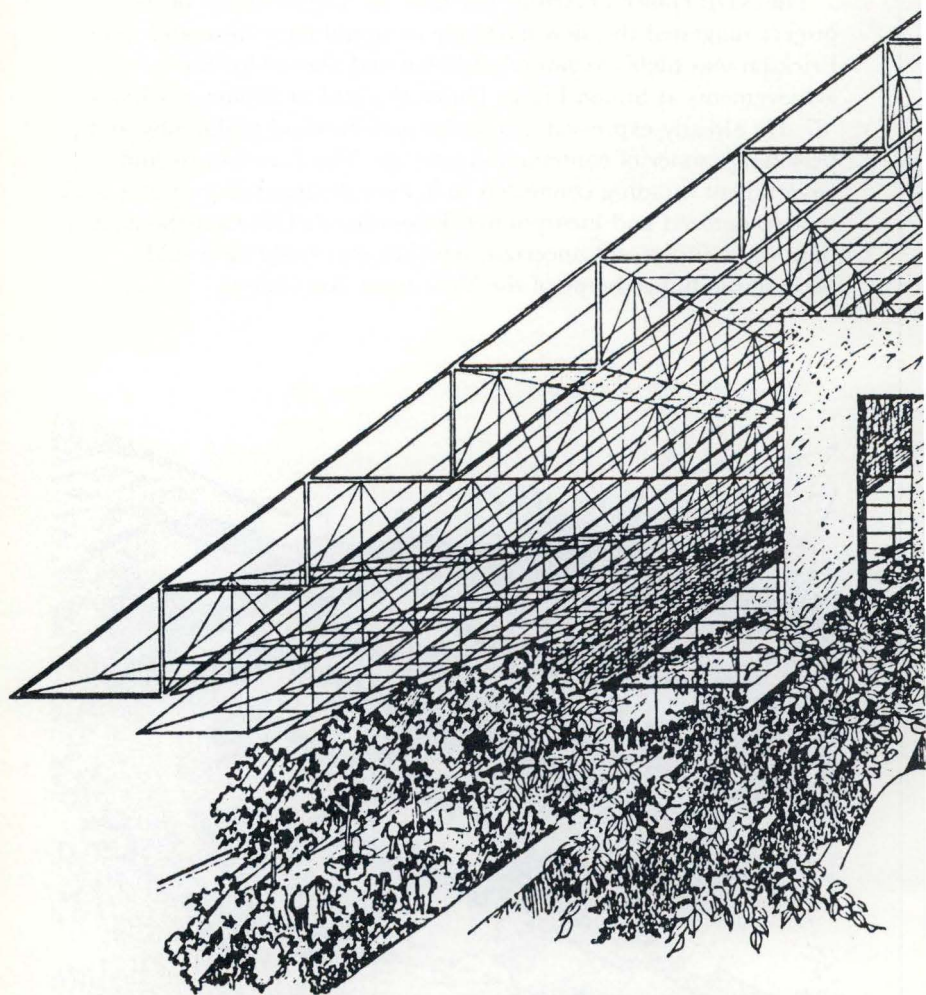
After a first speculative stage, however, the design team had to come to terms with the precise solutions for the many specialized accommodations the complex had to contain, especially in the Law Courts building, where it was necessary to create rooms appropriate for judges' courts and chambers, secure places for the accused, and many other specialized (or specially equipped) areas.



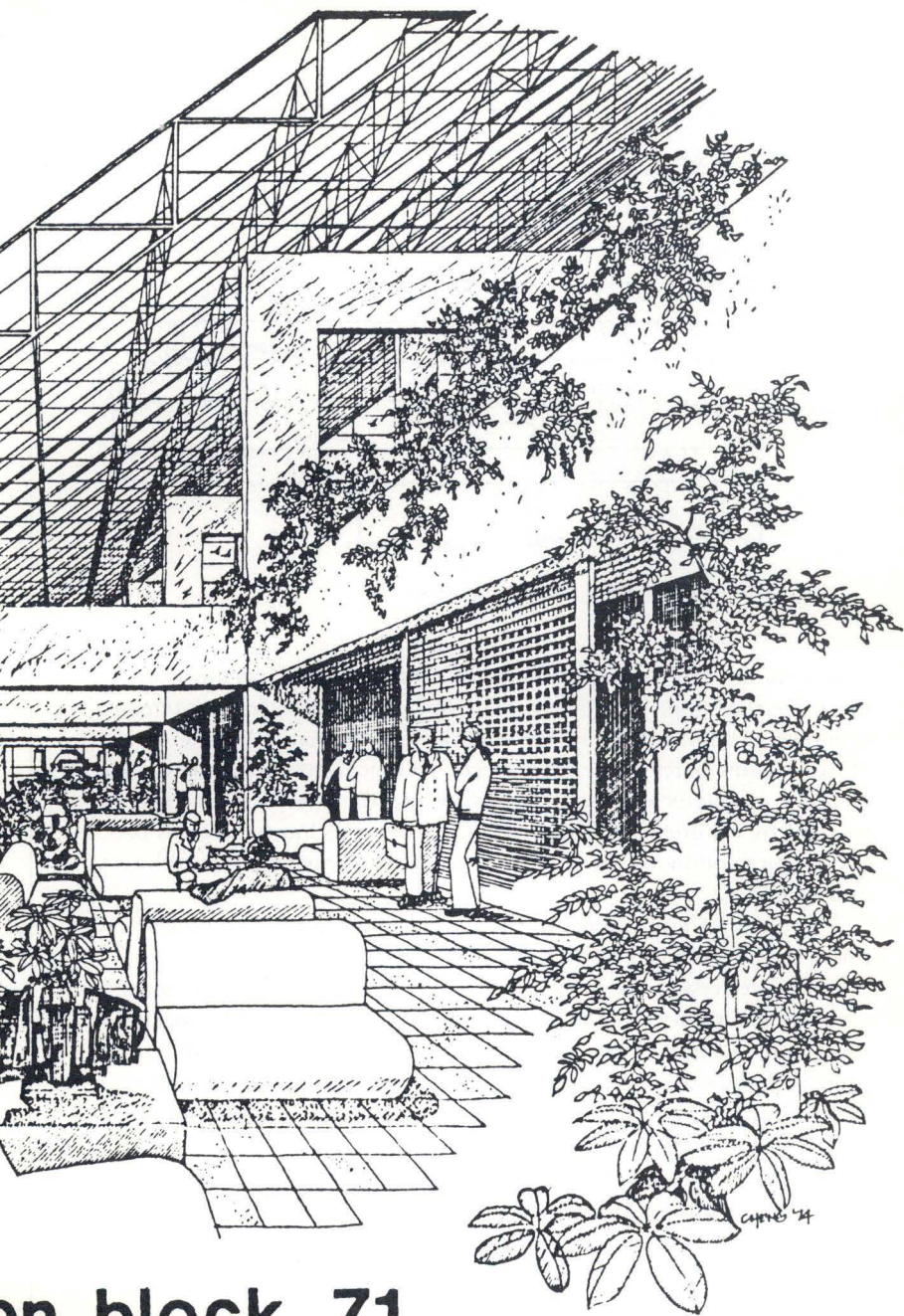
By the time the document, Block 71 Schematics, was produced in 1974, many of the technical features of the New Law Courts had been fully conceived. The Erickson team of architects and engineers was moving towards the construction of a multipurpose complex.

The NDP choice of Arthur Erickson as chief architect of the project suggested this new government would have taste and style. Erickson was highly regarded at home and abroad for his achievements at Simon Fraser University and at Montreal's Expo '67. He already expressed a complex architectural philosophy and a personal manner of contemporary design. The Law Courts and government building connected to it were designed as part of a park that recognized and incorporated Rattenbury's Old Courthouse at a time when it was still uncertain whether that building would become the future home of the Vancouver Art Gallery.

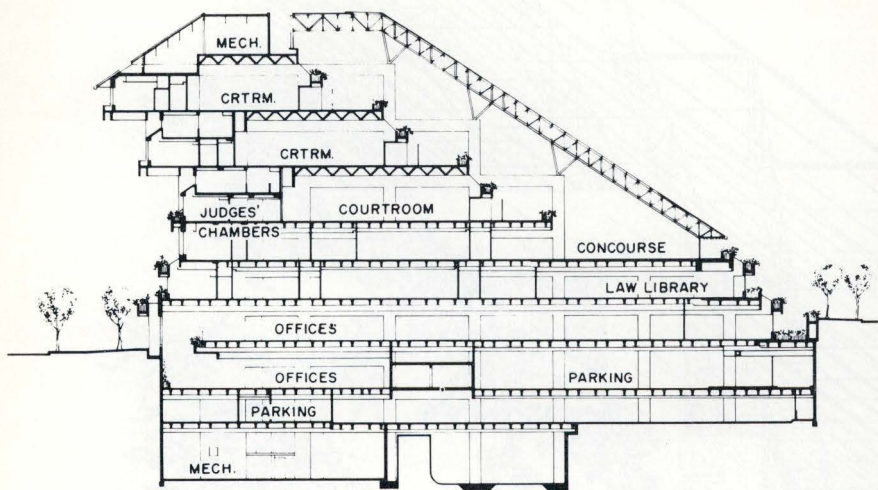




public gallery space



on block 71



70 ARCHITECTURAL RECORD December 1980

Schematics 1974 is a document that counterparts Specifications for a Court House, Vancouver, BC, 1907. It is, however, a statement of intent and philosophy rather than a working manual. Schematics 1974 contains notes on design aspects, technical matters, professional conduct, mechanical systems, acoustics and the like. It is designed to be read by an interested layperson. The more technical sections of Schematics communicate the concerns of the contemporary architect and engineer.

There are no equivalents to the carved lions' heads and swags listed in Rattenbury's Specification. There are many references to pre-cast prestressed concrete, poured and reinforced concrete, glass walls, space-frames, anodized aluminum, closed circuit TV, audio-visual aids—the methods and trappings of the modern age. Even fireproofing, now a mandatory requirement of all public buildings, is described and effected in terms that Rattenbury in 1907 would not have had at his disposal.

With Erickson's work one must always imagine that ideas will in part determine the form. Schematics 1974 made clear from the start the firm's views regarding courthouses, an approach based on the research of Project Architect Rainer Fassler in the USA and Canada:

the courthouse has traditionally in North America borrowed the symbols of classical architecture to lend an appropriate dignity and solemnity to its buildings. The grand stairway and classical portico are part of this evident wish to give the processes of law an appropriate setting. More recently . . . some courthouses have achieved an equally austere dignity through ponderous massing, or emphasized only the business aspect of law through putting the courts in standard office buildings.

In the Schematics document, this solution is suggested:

The courts, in presenting the necessary dignity of the law, should not exclude or inhibit the true participation of the public. . . . The courts are the servants of the society, reflect its ideals in the basic premise of British justice, that a man is innocent until proven guilty. The courts often unwillingly intimidate through their arrangement or architectural ponderousness, thereby effecting the opposite of their ideas. In most modern courthouses there is very little that offers reassurance to the distressed or even basic amenities for the participants forced to spend long hours in the court precincts.

Hence, the large, public access, glass-roofed gallery would be created as a major civic space "inviting public awareness and involvement in matters of justice," and as a ceremonial area for judicial, civic and provincial events. The building was intended, through its design, to promote public participation in the process of the law and to give the spectator unrestricted movement, except in the courtrooms and secure areas. Further, the lawcourt would contain many areas that would accommodate those who must wait there. Many alcoves suitable for quiet consultation, many rooms set aside for the purposes of media coverage, preparation, and education would be created. At the same time, the design would extend as much flexibility as possible in the recognition that "the entire judicial process . . . will change considerably during the life of the building."

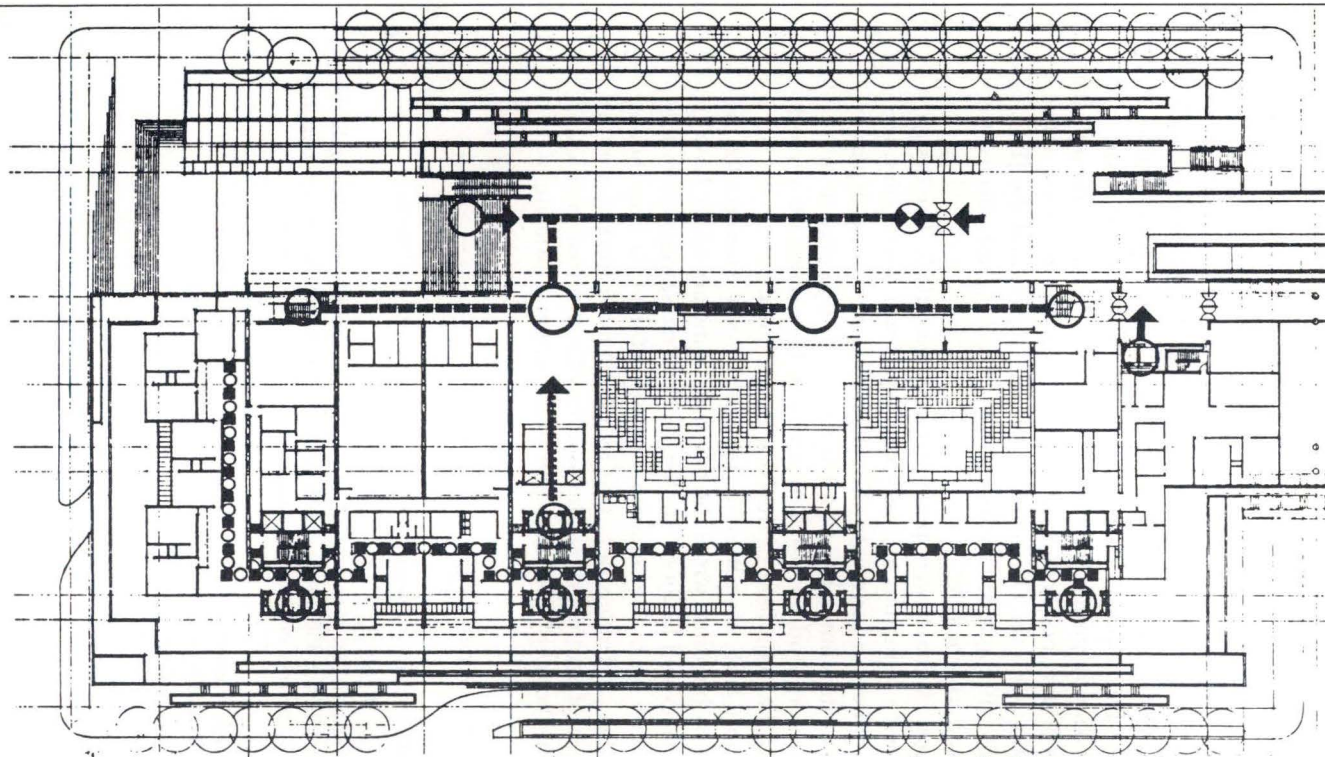
"In the usual courthouse," Schematics 1974 proclaimed,

the public space is the interstitial space between courtrooms. We will have changed this order from the courtroom being the focus of design, to its being complementary to the public space.

As the architectural rendering attests, a very detailed notion of the appearance of a glass-roofed public gallery adjacent to the courtrooms had been conceived by the time Schematics was presented. In addition, the cross-section through the lawcourts demonstrates that the relationship between the four major areas referred to in Erickson's original proposal — public space, courts and cores, judges' chambers, administrative and support facilities — had been worked out. The floor plan of the main floor indicates the presence of three large civil courts and their relationship to the judges' chambers and to the spectators' gallery that lies beyond.

Excavating the huge pit for the foundations, parking garages, and the water storage tank that would be a major feature of the heating-cooling system required all the modern cranes and equipment one now often sees at major construction sites. Not only is the philosophy on which the Law Courts design is based far removed from that which determined the appearance of Rattenbury's Courthouse; so also are the techniques of engineering far removed from a horse-team.

* * *



main court floor level
elev. 215.0'

circulation patterns

- public circulation
- barristers & handicapped
- restricted circulation
- vertical circulation

While the basic layout and architectural intent of the New Court House were established in 1974, construction was not started until 1976. In August 1974, the month of the Schematics presentation, the Justice Development Commission published a review of the project asking in principle for fewer and smaller courtrooms and the inclusion of provincial courts and more administrative space. After consultation with the Department of Public Works and the JDC, Erickson's office agreed to pursue the option that least affected the project and its schedule.

New cost estimates were presented in August 1975. The design changes were numerous and very complex: fewer courtrooms, the creation of new departments, the redefinition of existing departments, and the elimination of a full floor. The floorplan from Schematics Appendix 1 (1975) reproduced here shows the revised version of the main floor of the New Law Courts.

In August 1979, Ron Beaton, Assistant Project Architect for the Law Courts building, wrote the following summary of the Law Courts spaces and facilities. It offers an interesting contrast to the item by item list in the competition notice of the Old Courthouse, and, further, it demonstrates that by the time the work was in the final stages of consideration, the number of courtrooms had again risen from the revised twenty-eight to the original estimate of thirty-five.

BLOCK 71 THE LAW COURTS STATISTICS

Site Area

Bounded by Nelson, Hornby, Smithe and Howe 475 x 260 feet

Main Court Floor

12,000 square feet concourse giving access to three upper public galleries each of which is 350 feet long contained under the steel structure supported glazed slope roof enveloping a volume of 1,700,000 cu. feet.

Courtrooms

- 3 appeal courtrooms
- 14 criminal jury courts
- 2 civil jury courtrooms
- 11 civil non-jury courtrooms
- 2 commercial courts
- 3 motion courts

35 Courtrooms

Chambers

60 judges' chambers plus two suites/offices with conference rooms for chief justice of appeal and supreme courts.

Accused Accommodations

22 holding rooms in primary holding areas adjacent to vehicle bays

24 holding rooms on upper mezzanine levels adjacent to courtrooms

Parking

140 public parking spaces

110 restricted parking spaces for judges/staff, sheriffs' use etc.

Materials

43,000 cu. yds. of cast in place concrete

70,000 sq. ft. of brown elm finished wood panelling

150,000 gallons of water contained for waterfall systems

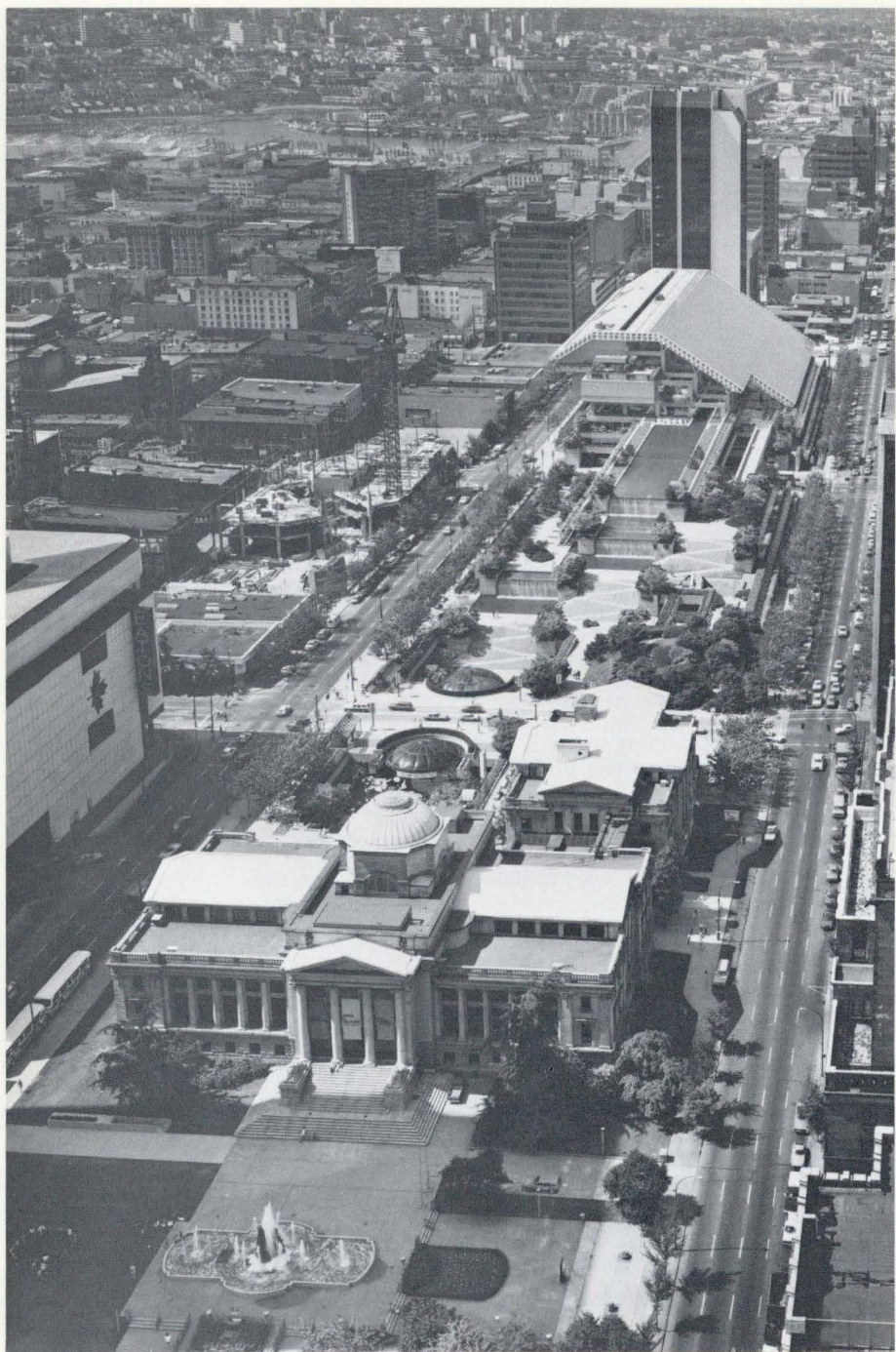
NOTE

- ¹ Historical information, architects' statements, etc. about the New Law Courts and the conversion of the Old Courthouse are derived from notes and documents in the Archives of Arthur Erickson Architects in Vancouver.

IMAGES

PAGE

- 38 V. Tony Hauser.
39 Arthur Erickson Architects.
40 Arthur Erickson Architects.
42 Arthur Erickson Architects.
44 City of Vancouver Archives.
45 Arthur Erickson Architects.
48 Nathan Hohn.



The Glass Roof

For the purpose of this essay, the juggling of the positions and numbers of required courtrooms will be of less significance than the on-going process of designing an appropriate roof. This process reveals facts and techniques that contrast and parallel those which characterized the process of constructing Rattenbury's dome.

As stated earlier, the glass roof is the crowning achievement of the Robson Square concept. It is of a type that is, on the one hand, a logical outgrowth of iron and glass nineteenth-century structures like the Crystal Palace and, on the other hand, an exercise in the contemporary space frame, which is a concept Erickson had worked with before, specifically in his design for the roof of Simon Fraser University's mall.

As with other aspects of the design of the Law Courts, upon first presentation on February 16, 1973, Erickson had a general (not a particular) impression of the visual impact and structural components of the glass roof. At the time the model was unveiled for provincial and civic officials, the gallery of the courthouse was described, for example, in this simple way:

Along the western side of Block 71, the north-south pedestrian spine passes through a large glass-covered public space extending almost the full length of the block.

By the time Schematics 1974 was presented, however, Erickson's office had a detailed impression of the roof's physical appearance:

The glazed roof over the public space is a light steel space frame structure. The structure has a three dimensional system of diagonals that form a pyramid with a rectangular five foot by six foot base. The space frame will be fabricated from light tubular metal sections and supported on concrete frames which are extensions of the . . . wall systems. The space frame extends down to the edge of the main court floor thereby enclosing the main public space.

The glazing skin of the roof will be supported by an independent mullion system which is superimposed onto the space frame structure. All vertical glass walls will be suspended from the space frame. . . .

The impact of the roof upon the mechanical systems of the building was also noted in this document:

Although the space below the glass roof is fully enclosed it will basically be exterior in character and a wider comfort range has to be accepted than for fully air conditioned working environments.

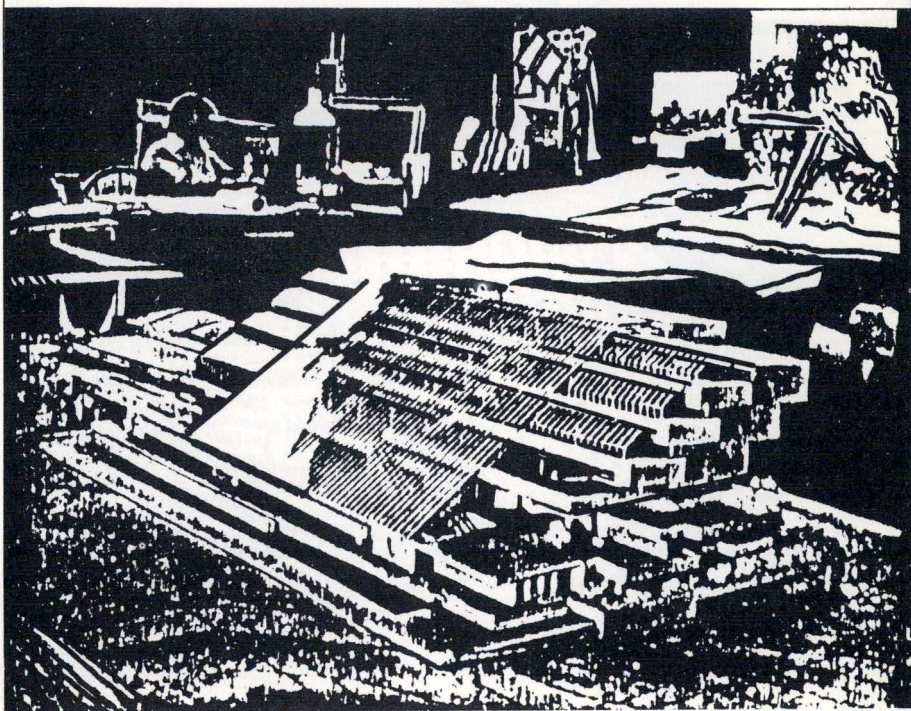
In order to reduce solar heat gain and to lessen glare on people passing through the space, the roof is glazed with tinted heat absorbing glass. Large overhangs of the roof will shade the clear vertical glass walls at critical heat gain periods.

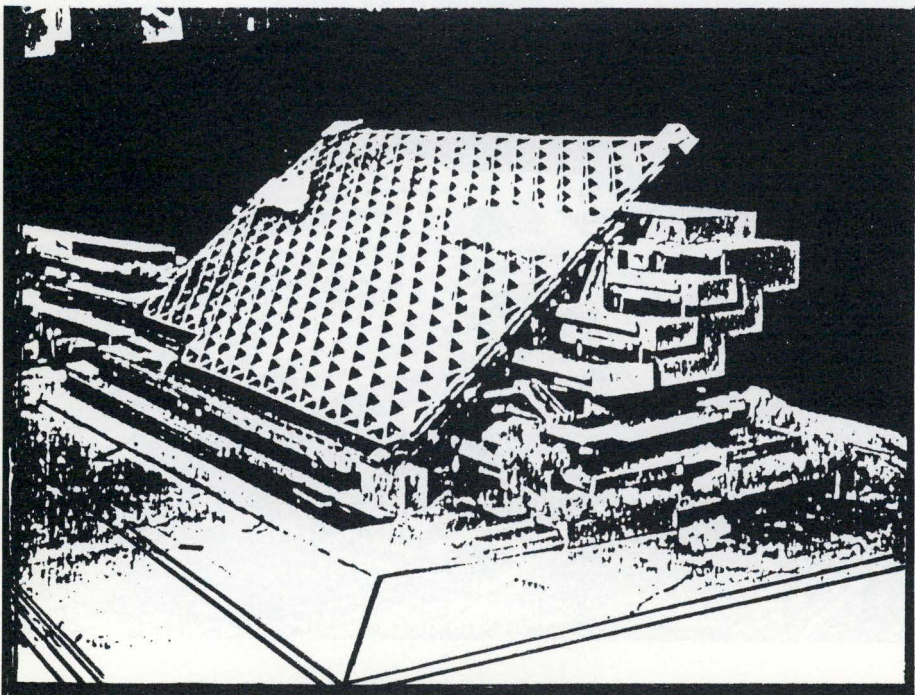
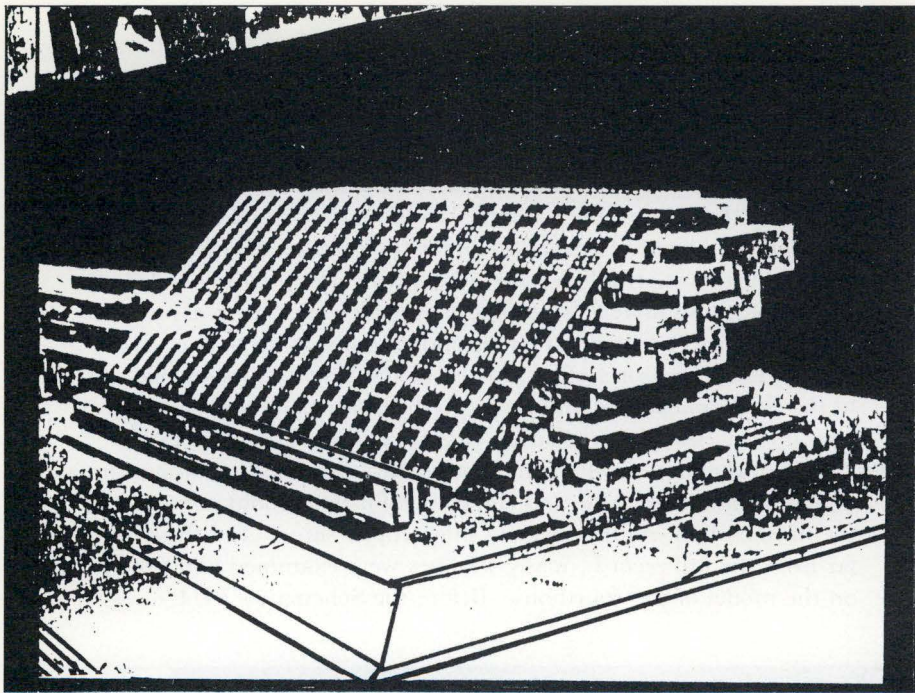
The main space will be ventilated by making use of the natural stack action. Ventilation openings at the bottom and the top of the main space will insure sufficient air movement to control the summer temperature inside to 5 to 10 degrees above outside temperatures.

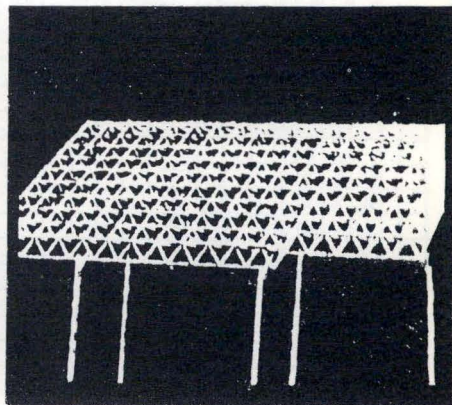
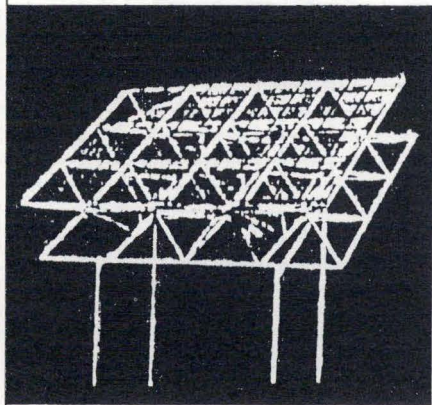
Many very precise glazing requirements are outlined in Schematics 1974. Not only would the work comply "with all governing codes and regulations pertinent to it but also very specifically outlined technical factors should be followed as it was designed." Under "Provision for Thermal Movement," the Schematics document states that the "wall should be so constructed as to provide for noiseless expansion and/or contraction of component materials as will be caused by an ambient temperature ranging from plus 10 degrees F to plus 180 degrees F." Under "Structural Properties" it warns that the "aluminum curtain wall and all its related components shall be designed for both flexural and torsional stresses" as determined by the document; the "allowable stresses for all curtain wall structural elements shall be established by the wall contractor and shall conform to the minimum standards as published in the Aluminum Association's *Aluminum Construction Manual* . . . dated November 1971."

Schematics 1974 also contains much useful general information regarding the tasks of the various professionals, manufacturers, and suppliers who would be responsible for the erection of the glass roof of the courthouse. It alludes to studies, drawings, building code regulations, and materials' standards to which the participants in the project had to adhere. Correspondence and other materials preserved in Erickson's office document the lengthy process that led to the final appearance and final specifications of the materials assembled in the glass roofed main gallery of the Law Courts.

One of the most fundamental considerations was the relationship between the metal frame and the glass infill that would comprise the finished roof. As this series of photocopies shows (and these are far from the full record), many schemes were examined and tested on the model of the courthouse. Before the Schematics 1974





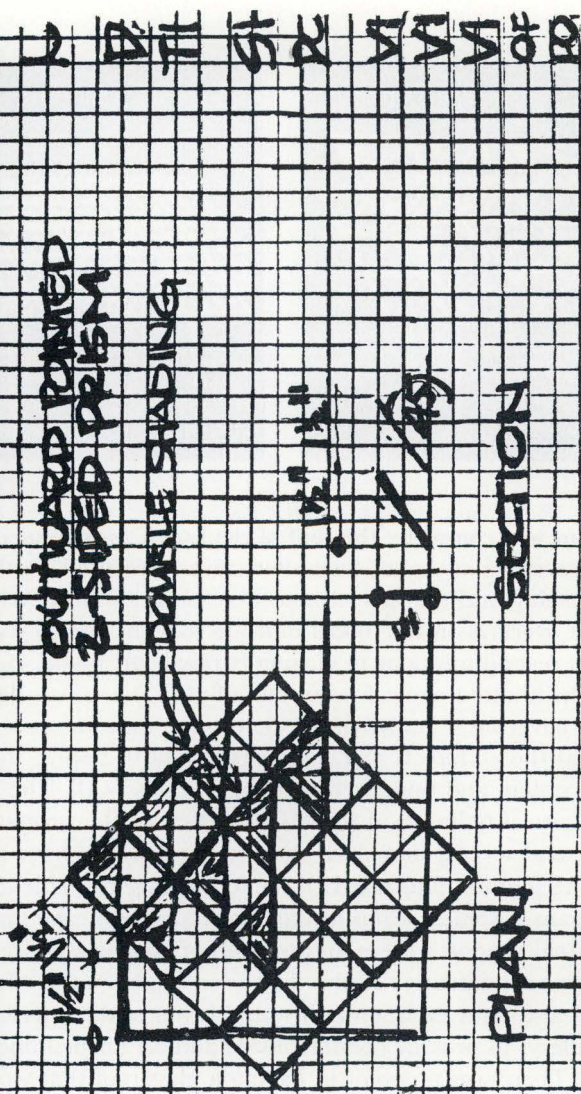


document was complete, the roof of the Law Courts underwent several revisions in shape; even after it was presented, further studies of the glazing and the space frame were undertaken. Further, the celluloid overlays on the model indicate that the design team explored several solutions to glazing (striped, prismatic, curved) before the abutted one-colour system of glass sheets was decided upon as covering. Finally, these photocopies indicate some of the ways that the architects and engineers sought to resolve the metal support system and understructure for the glass wall. The photocopies of balsa wood models also attest to the various solutions devised, and several show how the structures would have received glass. The solution illustrated on the top of page 52 — the most simple and elegant — comes closest to the one employed in the final scheme.

The final support system and method of glazing were reached only after very intensive studies had been made on the effects of the heat and light each solution would bring to the interior of the glass gallery, to provide comfort inside and an unencumbered view outside. There was no point in having a glass roof that would overheat the building and no point in using glass if one could not see out of the courthouse. If either of these problems had no proper solution, the “enticing the public” aspect of the building’s “Design Philosophy” would not have been accomplished.

GLASS ROOF BLK I

SHADING DEVICE II



PLAN

SECTION

PRODUCED SHADE PATTERN

Helmut Kassautzki's extensive tests—run on the basis of statistics taken from solar and temperature patterns—documented the results expected through the various combinations of glass types and support systems at four particularly critical times of the year. This most thorough examination provided a data base that assisted the team in making a final and appropriately tested decision.

Most of the essential decision making concerning the new Law Courts' roof, as erected, did take place before the August 1974 presentation of Schematics. In the period during which redesign of the courthouse took place, however, some further consideration was given to the size and type of the glass units which glazing consultant Eugene O. Tofflemire Associates would supply. These details were worked through with Helmut Kassautzki, the person on the design team responsible for such matters. The space frame material that was finally fabricated and erected omitted a very critical series of holes specified by Erickson's firm. This error caused some warping when water froze in members of the support system during construction and led to negotiations, corrections, and delays. As with Rattenbury's dome, then, even to the very last moment the roof of the New Law Courts presented special difficulties in construction.

It is clear that the procedures which led to the finished Rattenbury Courthouse and those that accomplished this glass roof tell us a good deal about the continuity and change that have taken place in architectural practices and conduct in the almost seventy years that separate their dates of inception.

IMAGES

PAGE

51	Arthur Erickson Architects.
52	Arthur Erickson Architects.
53	Arthur Erickson Architects.
54	Arthur Erickson Architects.
56 & 57	Nathan Hohn.





Other Technical Aspects

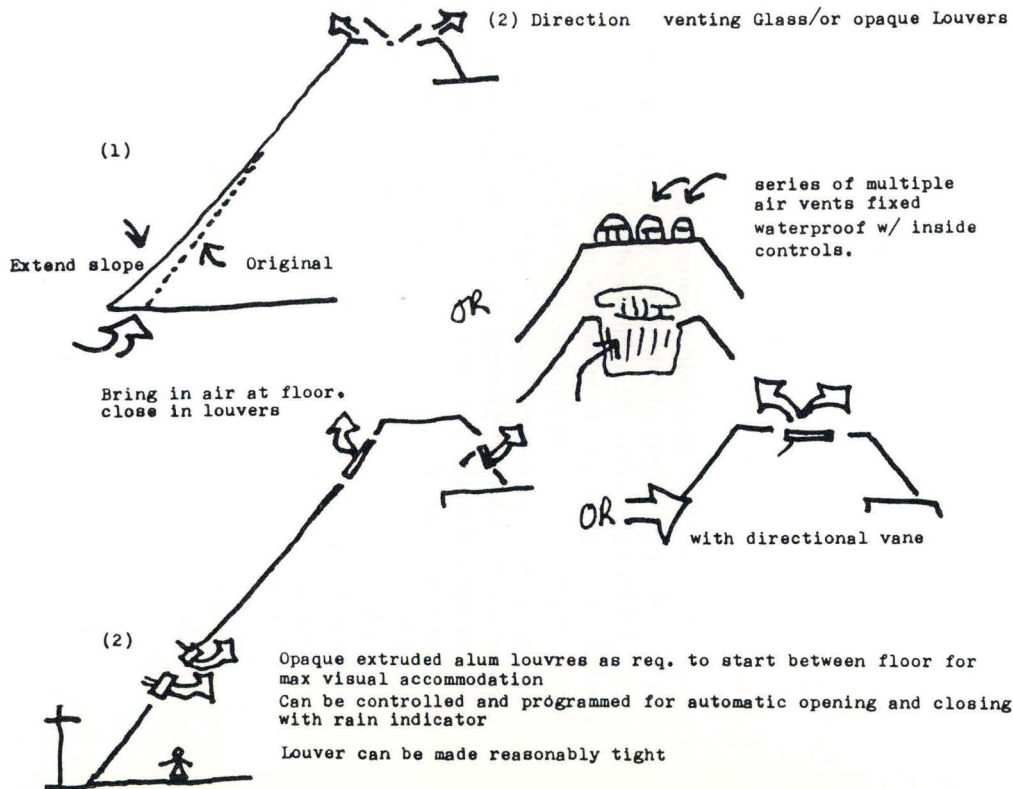
Although the glass roof is fully enclosed, according to documents prepared by Erickson's office, it was to be considered as "exterior in character." By this the firm meant that, because the roof formed an interface with the exterior and partook of the weather and heat conditions without, the regulation of its warmth and coolness would be at variance with levels maintained in other wall-enclosed portions of the building. The design team foresaw that the vast interior space of the gallery would be "ventilated by making use of the natural stack action" in the air enclosed within.

AEA's manner of dealing with the special problems concerning the regulation of comfort levels within the diaphanous structure is evident in the sketch reproduced here. They chose to capitalize upon and promote effects caused by the natural circulation of air. They were probably assisted in this conclusion by precedents outlined in a very sophisticated article on heat systems for space frame structures, by B. Etkin and P. L. E. Goering, entitled "Future Possibilities and Challenges: Air-curtain Walls," which was part of the design team's research materials. When an overall heating system was worked out with Reid, Crowther and Partners Limited of Vancouver, Erickson's firm committed itself to one that used stored water, warmed during off-peak hours (overnight), to heat the complex during the day. This system required the construction of an 840,000 gallon storage tank (greater than the volume of water contained within the Vancouver Aquatic Centre's pool). Its effectiveness would depend upon "a uniquely sophisticated computerized control system," but the idea itself depended upon a

EXTERIOR WALL VENTILATION PROPOSALS

B.C. LAW COURTS 7/17/74

in Alum frame



basic law of the physical behaviour of water; that is, when a layer of warm water lies over a layer of cold water, the two will not mix because of differing densities. At night the chilled water in the tank is regulated by piping water from the top into the chillers, and slipping it back into the bottom of the tank. Hot water, on the other hand, is the basis of the heating system. Water, 150,000 gallons of it, is contained within Block 71 to create the waterfalls for Block 61.

The falls themselves are created by the water circulated from the tank up over the roofs of the Government Buildings as one important fireproofing measure. There are also automatic sprinklers that will release water to contain fire and smoke. These are placed especially in the underground areas where combustibles are found in considerable quantities.

This work of contemporary architecture strives to achieve the integration of all systems and material means. Hence the water that is necessary for the falls flowing from the roofs of Block 61 is also useful for heating and cooling systems and for fireproofing. Schematics 1974 contains many statements that allude to interchangeability of spaces and flexibility of planning. It could be demonstrated that Block 71's form emerged in part from a consideration of the movement patterns among the secure and non-secure, public and limited access areas required in the New Law Courts. In the case of the open area offices, for example, the design, as well as the design process, is as open-ended and open planned as that of the Old Courthouse was fixed and closed-doored. However, the major courtrooms and some other facilities were fixed at the beginning of the design process.

Finally, the glass for the space frame was not ordered in the way Dalton & Everleigh requested, as an already manufactured type of wired glass. Instead, it was specially designed to suit the purpose. A wide range of opinion was scrutinized before the final orders for glass could be made. It is interesting to read the preserved correspondence that led to the choice of the system we see. It contains information that was intended to help Erickson's firm decide among several available types of glass as they moved towards the preparation to Schematics 1974. Here is an excerpt from a letter from T. J. Winzler of the Libby-Owens Ford Company to D. J. Christ of AEA:

You enquired if any testing had been conducted that indicated that tempered glass had more resistance to impact than conventionally used types of glass.

Impact test for skylights have been conducted in Houston with safety glass...

Impact with a 2-lb. steel ball showed fracture of single samples (36" x 48") at the following drop heights:

1/4" laminated	5 ft.
1/4" wired	6 ft.
1/4" tempered	16 ft.*

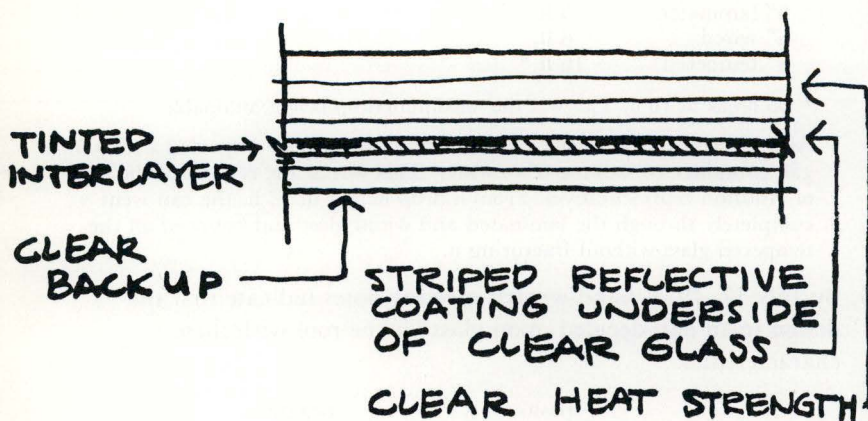
* no break at 16 ft. This was the maximum drop height attainable

As a more practical demonstration, the glass was also impacted with a 5 gal. container containing 6" of water. This was at the request of the City of Houston representatives. From a drop height of 12 ft. the can went completely through the laminated and wired glass and bounced off the tempered glass without fracturing it.

By July 17, 1974, hand-written meeting notes indicate that the design team had decided upon glass for the roof with these characteristics:

Roof type	positive attributes	negative attributes
1/2" tempered tinted and reflective	High strength resistant to thermal stress. Can be walked on. If it breaks will not fall full height of slope wall.	will fracture but can drop in large fractured chunks. replacement. extra lights should be kept in storage

By August 22, 1974, the architectural firm knew that the specifications in the chart reproduced here had to be taken into consideration. Even after the Law Courts entered into its redesign phase, the covering for the glass gallery was still unresolved and a member of the team was thinking of this special order:



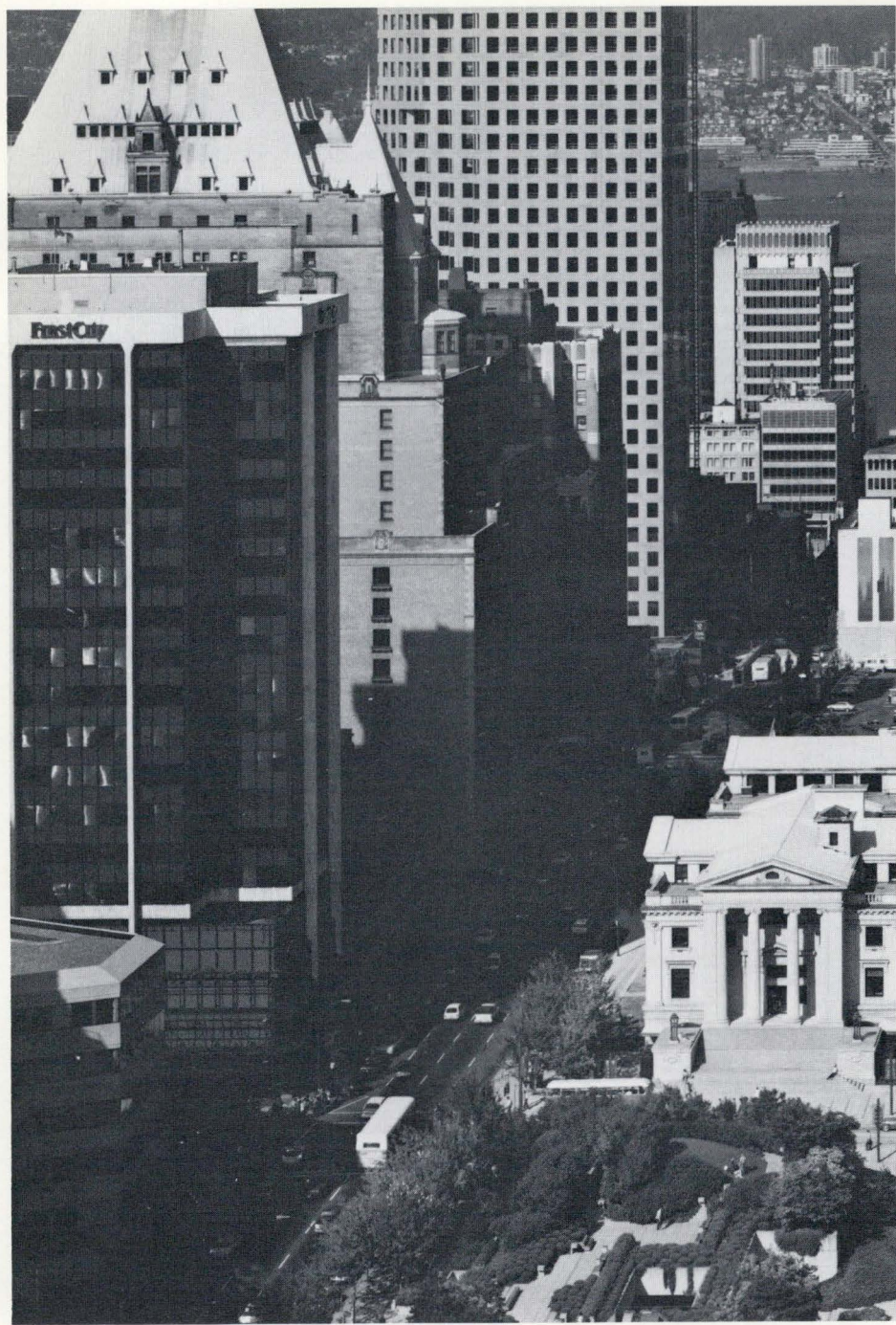
By August 20, 1979, the glass for the skylight roof of the court finally had been decided upon. It was recorded in a memo of that date that a "Laminated glass assembly consisting of 12mm ($\frac{1}{2}$ ") clear annealed glass; .060 polyvinyl butyl interlayer; 6mm ($\frac{1}{4}$ ") green heat absorbing/heat strengthened glass" had been chosen. The glazing consultant was Eugene O. Tofflemire & Associates. The skylight contractor was Central Glass Products Limited, Vancouver.

Subject	Notes	Action by
1. DEFINITION OF FORCES	In order to provide design data for glass manufacturers and for sub-consultants, the forces were roughly defined as follows: <u>Wind forces:</u> 25 lbs/ft²/perpendicular to vertical glass walls <u>Snow and Ice loads</u> = 20 lbs/ft². The combined wind, snow and ice loads of 45 lbs/ft² would be sufficient to account for high velocity winds, wind would remove the snow and ice from the roof. <u>Negative suction</u> forces are anticipated to be higher than ordinary wind forces but would not exceed 45 lbs/ft². <u>Uplift forces</u> at the cantilevered overhangs might cause some glazing problems and have to be studied in detail. Since the spaceframe is a light weight structure, <u>seismic forces</u> would be easily accommodated. The seismic impact on the independent glazing system, however, might be severe. Thus the glass and mullion connections require special attention. <u>Expansion forces</u> would require at least one expansion joint. The two smaller space frames of 170' x 170' would each expand approx. 3". In order to accommodate the expansion forces top and bottom supports would have to be of moveable nature, whereas the connections to the concrete frames would be rigid. <u>Turning moments</u> at the top of the suspended glass walls at either end of the public space (assuming weight of 7 lbs/ft² for suspended glass wall) will stay within the overall space frame deflection limitations.	

IMAGES

PAGE

- 59 Arthur Erickson Architects.
- 62 Arthur Erickson Architects.
- 63 Arthur Erickson Architects.





THE OLD COURTHOUSE CONVERSION

Introduction

When Erickson's firm undertook the redesign of Blocks 61 and 71 in 1973, it was already known that the Old Courthouse on Block 51 would be part of the scheme. In 1974 the firm was engaged to do a feasibility study on what possible civic use could be made of that building. Although several alternatives were suggested, the architects thought its conversion into new premises for the Vancouver Art Gallery "the most promising" idea. In 1976, after the appointment of the new director, Luke Rombout, the Vancouver Art Gallery Association commissioned a study called "Functional Program for the Vancouver Art Gallery." Its author, Gustavo da Roza, a Winnipeg architect, was concerned to create a document that did not have to be tied to the Courthouse as site, although there was never any question that it was "one potential solution to the space requirements of the Vancouver Art Gallery."¹

This report also recognized that there were no plans whatsoever to demolish the Courthouse. It had been declared a heritage structure by the provincial government through a process that did not exist before 1972. This designation, as we shall see, dictated the handling of the new features incorporated into the Robson Street facade when the redesign process began. Earthquake proofing and the provision of adequate fire exits were necessary by law because reconstruction exceeded twenty-five per cent of the building's replacement value. To meet these requirements, the interior of the Old Courthouse was virtually gutted. Finally, the gallery had to be renovated in such a manner that it would conform to the rigorous standards of light and heat regulation and of security demanded in a world class museum.



Government grants were augmented by funds raised through a highly successful campaign called "Take the Gallery to Court." The fund-raising goals were based upon Arthur Erickson Architects' cost figures as set out in the concept design study the firm was commissioned to produce in 1977. Construction began in December 1981. The new Vancouver Art Gallery was opened to the public in October 1983.

Because it was a heritage structure, no change could be made to the facades of the Old Courthouse without appropriate government approval. Erickson changed very little of the original exterior, and when it was altered, many of the renovations were made to appear to be part of the earlier structure. For example, on the roof of the Old Annex there is now an immense new chimney that looks as though it was there since the beginning. Created to perform all venting functions for the three major buildings on the site, it was finished with decorative flourishes which matched those on the original elevator penthouse of the Old Annex. The elevator penthouse was resurfaced in a contemporary grey stucco like that on the new chimney.

Some external alterations were major and executed in a modern manner and in materials which blended with those of the Old Courthouse. The imposing new Robson Street entrance falls into this category. Here, flanking floor to ceiling glass windows and doors, is a sturdy procession of orderless columnar supports, which are echoed by similar weight-bearing elements disposed within the lobby. These were executed in concrete of a hue that blends perfectly with the colour of the Old Courthouse's granite basement. Similar care in the preservation and blending of the old with the new has occurred within the gallery.

In the Hooper annex, which now serves as the VAG's administration wing, some of the original rooms have been left intact. The former law library was easily converted into an art library. Courtrooms have become meeting rooms, and offices remain offices. The present Board Room is one reminder of the rich elegance that turn of the century Beaux-Arts Classicism could represent.



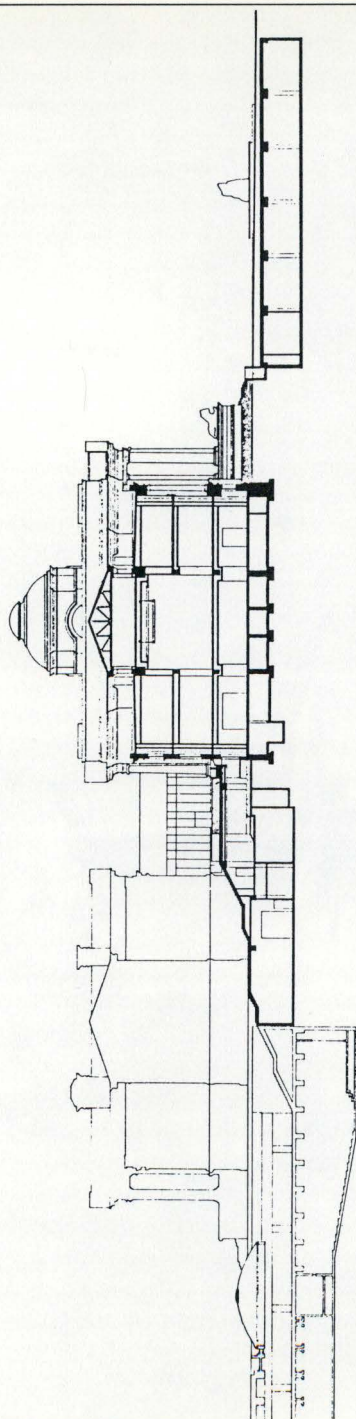


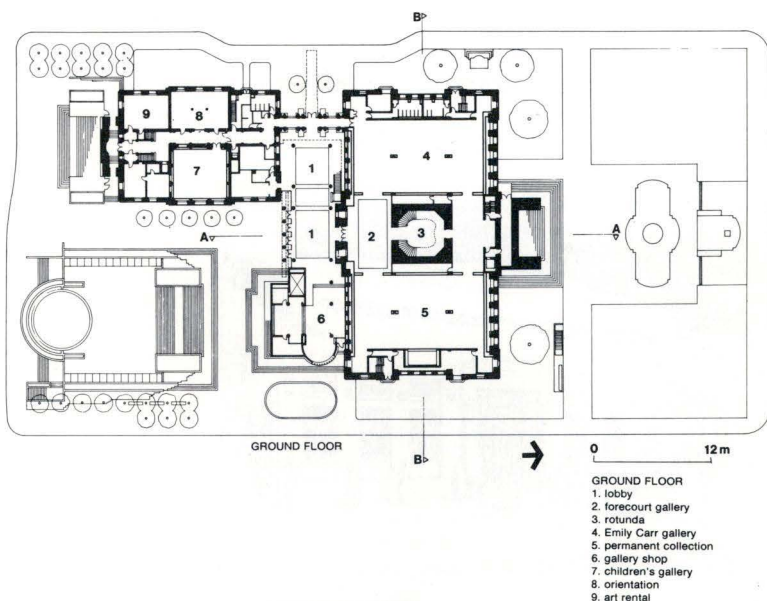
Few original rooms remain in the Rattenbury designed structure of the VAG. These basement rooms are low-ceilinged and used for dead storage. They are now surrounded by new high-ceilinged rooms designed especially for storage and preparation. In the main galleries, only the ceilings and pilasters of the fourth floor Prints and Drawings Gallery appear as they did in the original Appeals Court. These architectural details have been painted white to harmonize with the reconstructed white walls beneath them. The Rotunda, which is a masterpiece of historic renovation, is described in the section which follows. A comprehensible and comprehensive report on all aspects of the conversion is retained at Arthur Erickson Architects' office.









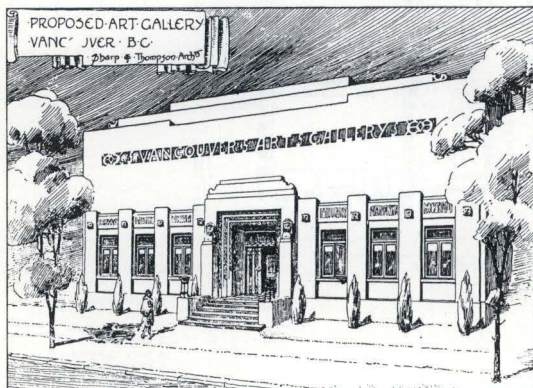


The premises into which the VAG moved can be summarized as follows. The main four-storey building contains 89,900 gross square feet of space; the Annex, 37,850. In addition, 37,050 square feet of new construction took place in the basement, ground, and second floors. An Appendix to the Gustavo da Roza study prepared by Erickson's office in January 1982 details what was recommended and compares it to what was finally provided in gross footage for every area of the space. The last page of another Appendix, prepared by Erickson's office in the same month, states that the total construction cost of the project so far was 15,701,835 dollars in total. The average cost of the reconstructed areas was 140 dollars per square foot; new construction had cost 130 dollars per square foot. The parts of the building which had required only minor renovations were estimated at 28 dollars per square foot.

The building which the VAG had previously occupied is shown in two of its phases below in a note.² The floorplans and the photographs reproduced in this section convey a sense of the current premises. No floorplan for the basement area is included here because, as with the secure areas of the new Law Courts, reproduction of it is prohibited.

NOTES

- ¹ This study, as amended in 1982 and with Appendices provided by Arthur Erickson Architects, and a recently prepared but undated summary, entitled Provincial Government Offices and Law Courts Building, Vancouver, British Columbia, are the two main documents from which the information in this section is drawn.
- ² Drawing of the facade of the old Vancouver Art Gallery premises:



Photograph of the old Vancouver Art Gallery as redesigned in the 1950s:



IMAGES

PAGE

- | | |
|---------|-----------------------------|
| 64 & 65 | Vancouver Art Gallery. |
| 67 | Vancouver Art Gallery. |
| 69 | Vancouver Art Gallery. |
| 70 | Vancouver Art Gallery. |
| 71 | Vancouver Art Gallery. |
| 72 & 73 | Vancouver Art Gallery. |
| 74 | Arthur Erickson Architects. |
| 75 | Arthur Erickson Architects. |
| 76 | Vancouver Art Gallery |

The Rotunda

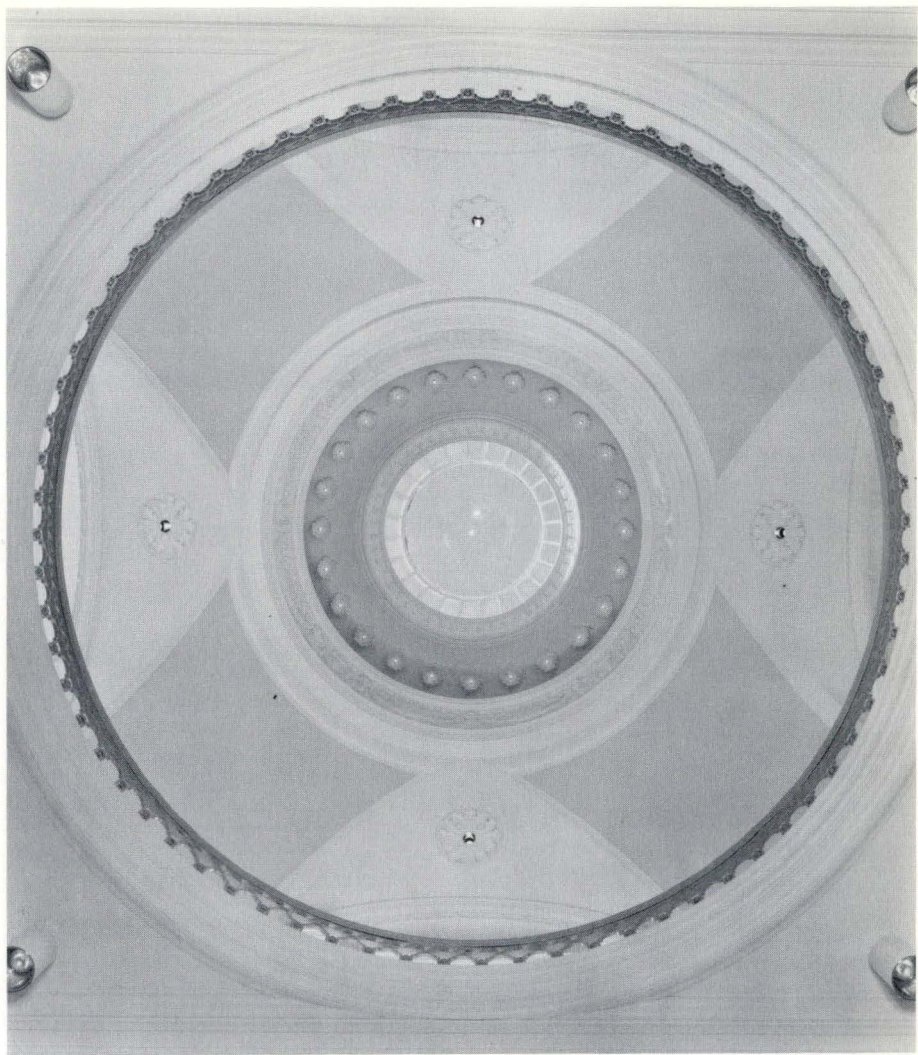
Although the new lobby of the Vancouver Art Gallery is a striking example of contemporary design, it is the delicately renovated Rotunda that is the masterpiece space of the entry. On entering the Rotunda, one has the sense of stepping back into the early decades of the century, for the area appears redecorated rather than reconstructed. This illusion attests to the architects' extreme care in preserving, restoring, and amending what was there originally.

In this new Rotunda, a grand staircase was created in what had formerly been a storage room. The half arches it contained have been painstakingly recreated as whole ones. Worn marble stair treads, taken from another part of the building, are set in the concrete structure of the contemporary steps that lead to the upper levels. This staircase is fitted with balustrades modelled on those which decorate the balconies of the upper levels.

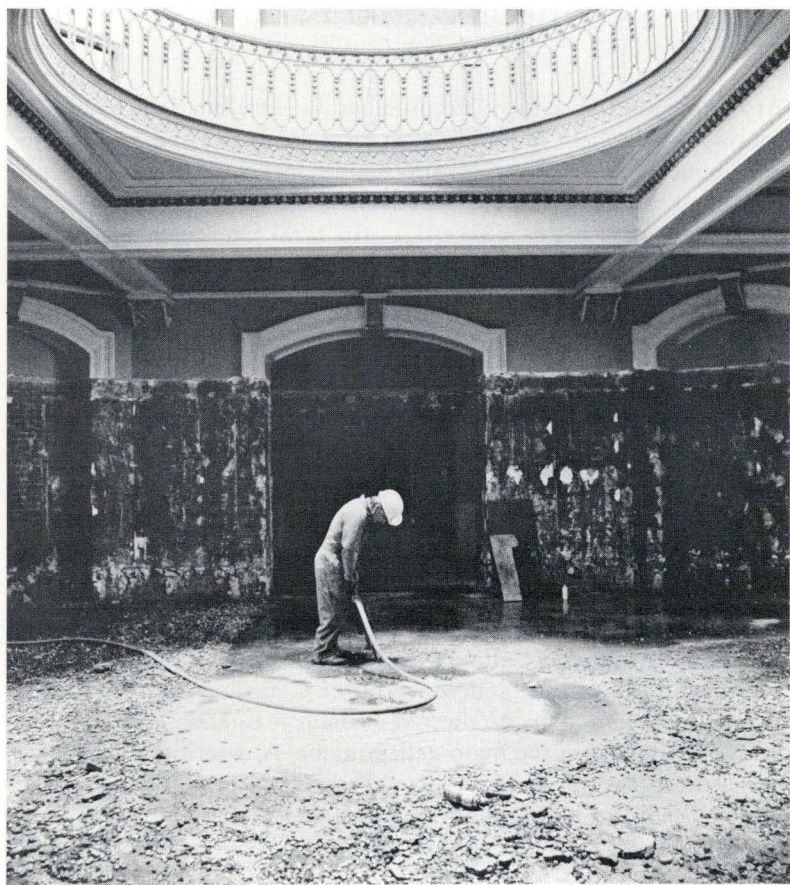
The three highest levels of the Rotunda have been changed very little, but most of the classical ornaments have been resurfaced. The subtle colours used in these areas have been chosen to fit in well with the neutral tones (greys and whites) that are employed in the galleries which flank the Rotunda on four sides. Plexiglass has replaced the glass of Rattenbury's dome. Concealed and revealed fixtures bathe this four-storey well with a magical light.

In the Old Courthouse, visitors gained access to the upper storeys via stairs set in one of the corridors near the central well. Now one ascends on elegant escalators on either side of the Rotunda. Several photographs document the difficult processes involved in the Rotunda's reconstruction.









IMAGES

PAGE

- 78 Vancouver Art Gallery.
- 79 Vancouver Art Gallery.
- 80 Vancouver Art Gallery.
- 81 Vancouver Art Gallery.

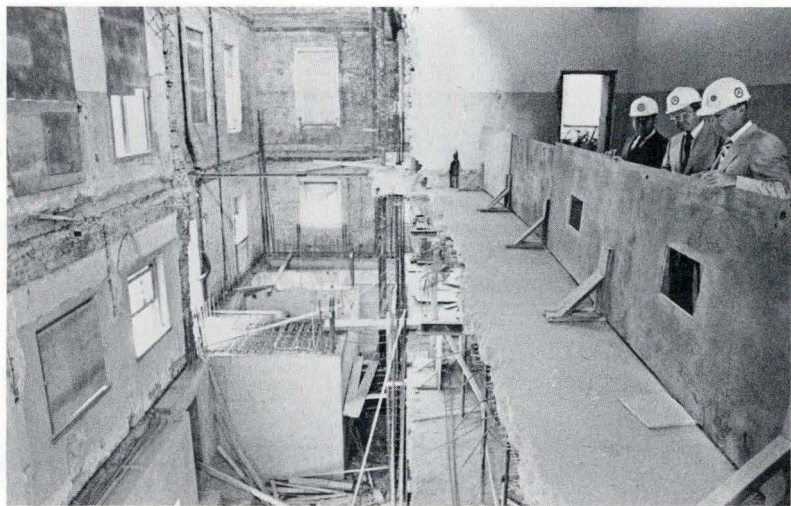
Other Technical Aspects

At the turn of the century, fireproofing was an issue. It is now a routine requirement in buildings in most categories and an absolute requirement in the construction of public spaces. The San Francisco earthquake of 1906 was the impetus that ultimately led to earthquake-proofing as a necessary structural requirement in new public and multi-storey buildings. Rattenbury, who was interested in engineering matters, had this response to the devastating tremor mentioned above:

... I am looking forward anxiously for the morning papers. . . . they knew that they were living over the earthquake belt. They have often had tremblings, . . . so that for years they built their costliest buildings of wood, buildings lined inside with ebony and marble. But recently they seem to have forgotten past experiences and have been building steel structures towering into the skies and now comes another earthquake and apparently down they have come. . . . (qtd. in Barret et al. 175-176)

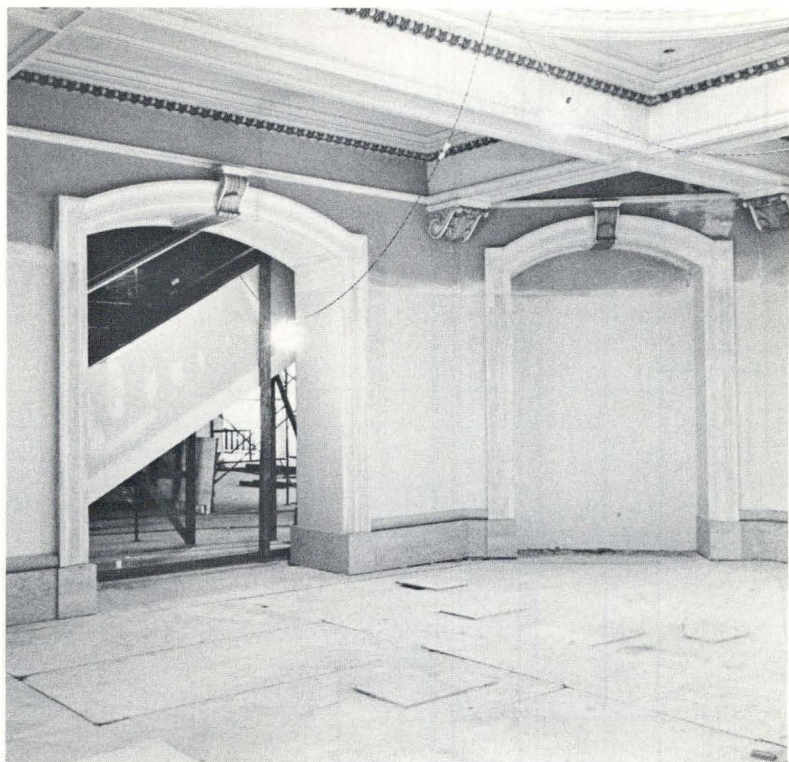
He would be pleased that portions of the new buildings at Robson Square and sections of his Old Courthouse have been designed to withstand the effects of motion. Indeed, one of the most challenging technical aspects in the conversion of the Courthouse is the new structural system. This is reflected in the construction cost of 3,472,000 dollars in the main gallery alone. A description of the structural system prepared by Noel Best, Designer and Project Architect for the VAG renovation, is included below.

Because of the program requirement for large free span spaces in the galleries, and the City requirement that this building now meet the current earthquake codes, the old masonry structure of the entire building had to be replaced. The new concrete structure is not, in itself, complicated. What was difficult was to develop a strategy for removing the old structure and inserting the new without the building falling down in the interim. To this end Bogue Babicki and Associates, the structural engineers, and Turnbull and Gale, the contractors, developed a procedure for building the new structure upside down, from the top to the bottom rather than from the ground up.



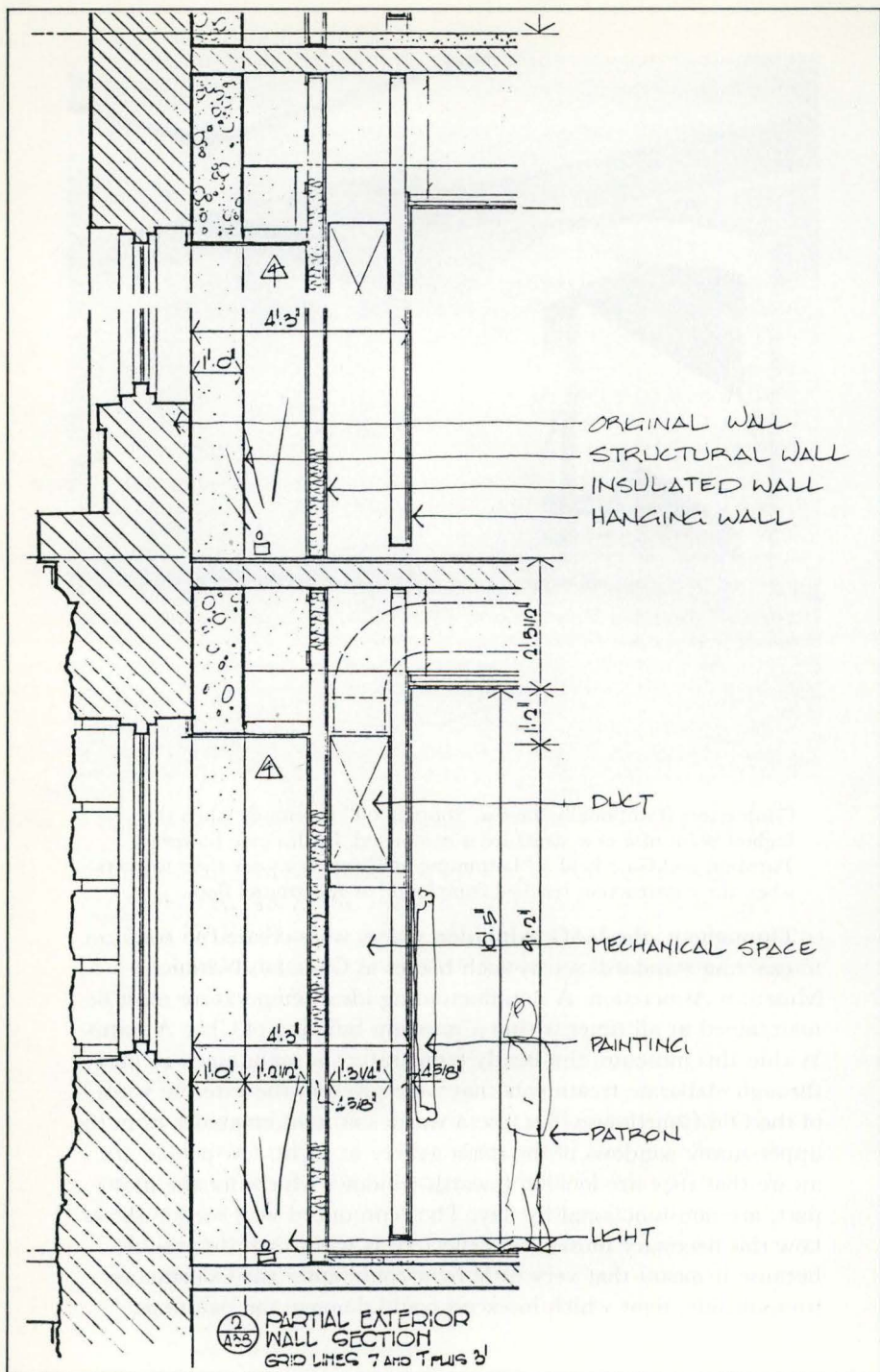
This procedure worked as follows. First, holes were punched through all five floors of the old structure where the vertical elements of the new concrete work would be placed. These elements include the new concrete shell around the perimeter, the elevator and stair cores and four new columns. These new concrete elements were then poured into place, one storey at a time from the foundations up to the roof. At this point, despite these violations to the original masonry structure, the building was still supported on the old system of walls and columns with the new concrete rising independently through the holes. Then starting at the top of the building, floor by floor the horizontal elements of the old structure, the beams and floor slabs, were removed, and the new concrete slabs and beams poured into connections with the new vertical elements. By this method the demolition and new structure proceeded down the building until completion at the ground floor. This description is a simplified version of what actually took place, many complicated side manoeuvres were required, but essentially this procedural concept was followed. This method provided the construction team with two major advantages. First, by proceeding from the top down the immense weight of the original masonry structure need never be supported by the new structure, the new only had to support the new; and second, the debris of the old slabs and masonry supporting walls could be thrown down and removed through the old structure, rather than jeopardizing new concrete. . . .





Contractors traditionally have a “topping off” ceremony when the highest point of a new structure is completed. In this case however, Turnbull and Gale held a “bottoming out” ceremony for their workers when the construction reached completion at the ground floor.

Throughout, the VAG exhibition spaces were created to conform to exacting standards set by such bodies as Canada’s National Museums Association. A non-fluctuating ideal temperature must be maintained at all times within a museum building of Class A status. Within this museum, the steady temperature is maintained in part through elaborate treatments that were given to the external walls of the Old Courthouse. Because a warm soft light emanates from the upper storey windows of the main gallery at night, few people are aware that they are looking towards windows which, for the most part, are non-functional by day. The reproduced wall section shows how this necessary illusion was effected. It was worth the trouble because it meant that very little light could enter the Courthouse from outside, light which in excess could damage the paintings.



These words describe the diagram and cast more precise illumination on the measures taken:

The exterior wall of Gallery building is now made up of four separate walls:

The first is the original stone wall of the building, constructed of granite and sandstone facing fastened to the brick bearing wall. The original windows have been left intact.

Immediately behind this is the new 12" concrete wall which now provides the structure for the building. This is pinned to the original wall with 1" steel dowels.

There is then a space of 14" before the third wall, the insulating wall, which is constructed of gypsum wallboard, steel studs and insulation. Between the second and third walls, there is a continuous strip of fluorescent lights running along the floor parallel to the windows.

There is then a space of 15" before the fourth wall, the hanging wall. This is a mechanical space bringing the supply and return air to and from the mechanical rooms out into the galleries. The wall itself is built of steel studs and gypsum wallboard with a ½" plywood backing. This plywood provides firm support for hanging the works of art.

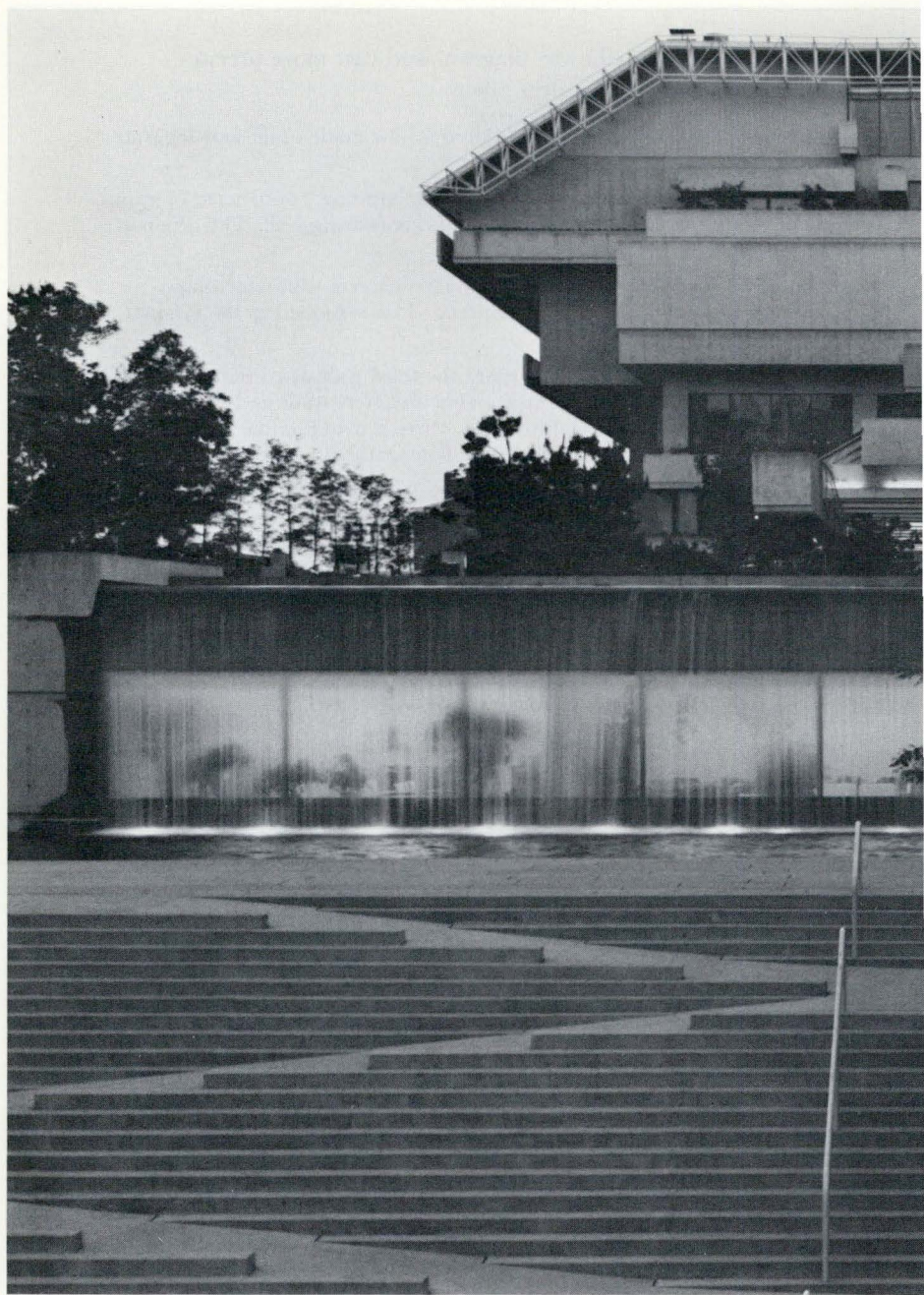
Together these four walls perform a variety of functions. A number of these are explained below.

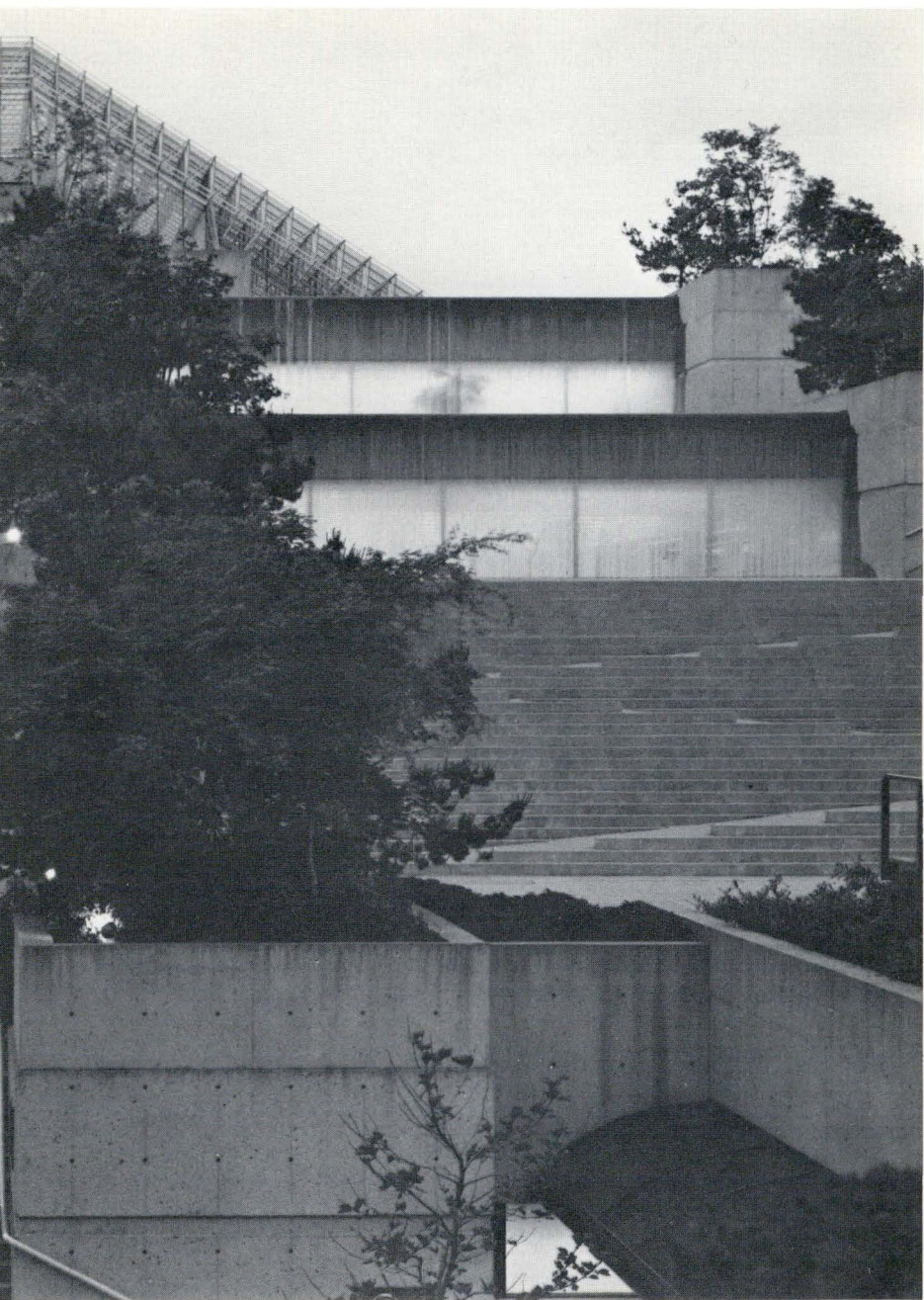
One of the critical problems was to provide the long runs of uninterrupted wall space for hanging the works of art, without merely blocking off the windows and thereby giving the exterior of the building a dead appearance. By placing the insulated wall approximately four feet back from the glass, painting it a dark neutral colour and lighting this space from the floor, the visual impression from the exterior is that of a space of indeterminate depth. At night the windows give off a soft glow.

There are, of course, many other technical features that could be described as museum requirements. Many additional aesthetic considerations incorporated into the design make the VAG not simply a functioning art gallery, but also a museum in itself a work of art.

* * *

The information contained in all sections of this monograph is intended to describe only some aspects of the progress of three building schemes that were carried out in two major structures on the Robson Square site. What is recorded is sufficient to put to rest the often-voiced assumption that only traditional (pre-modern) architecture was built with care and a desire to create beauty. In the essay which follows, the reader will be taken visually and verbally on a walk through the square.



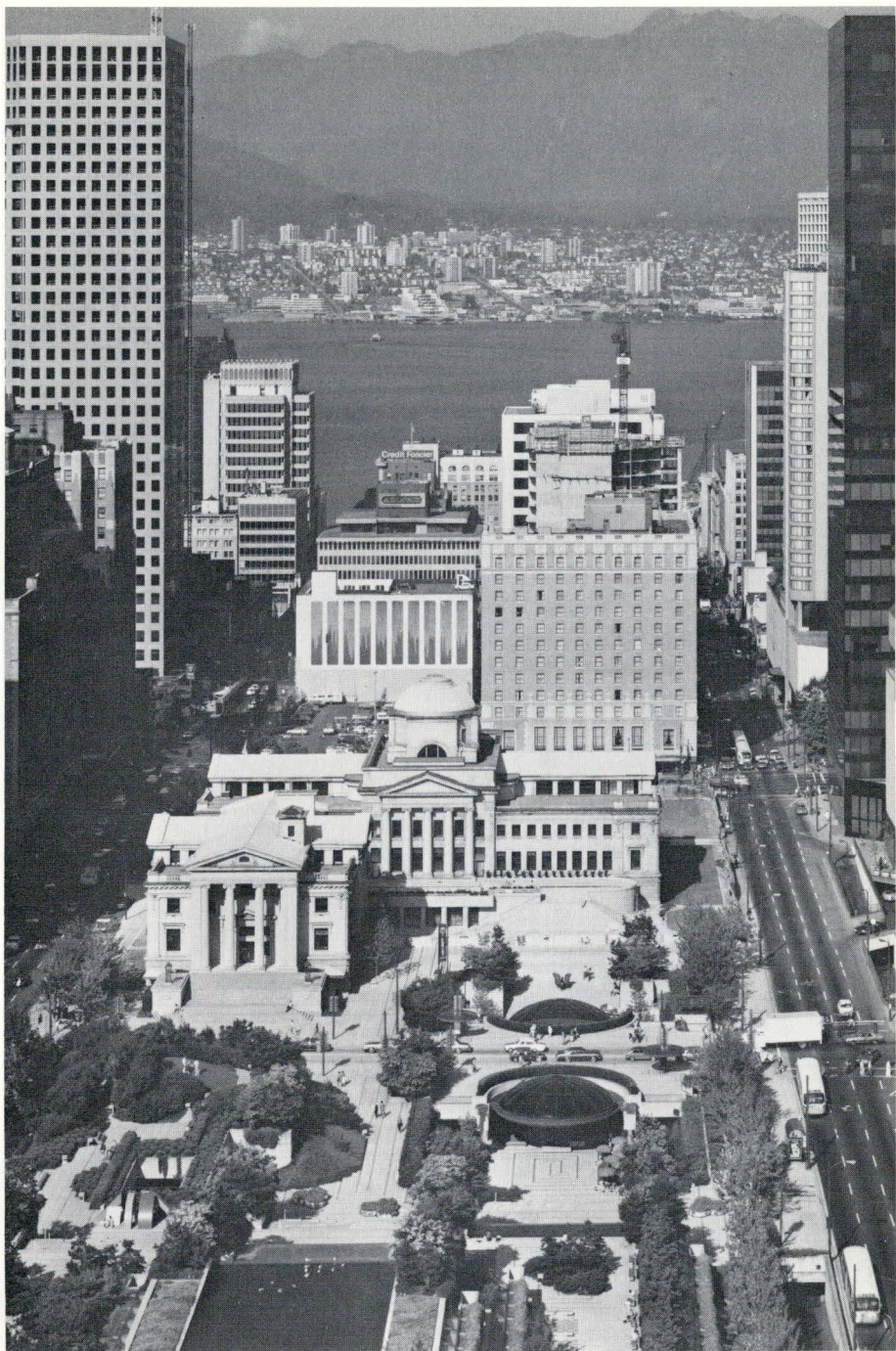


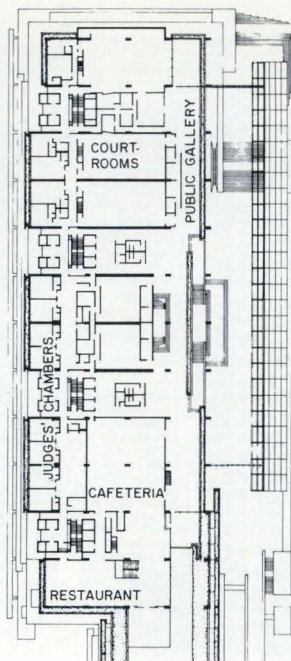
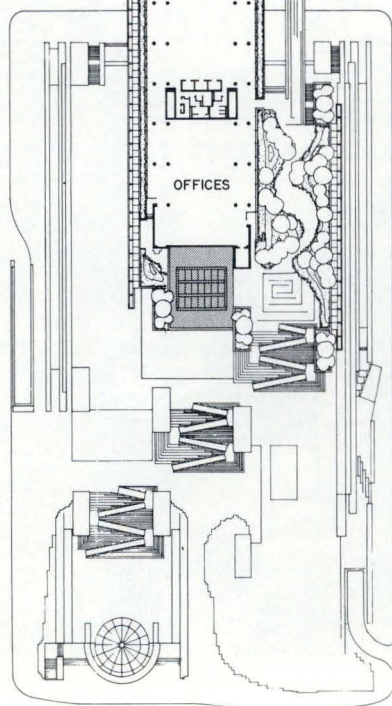
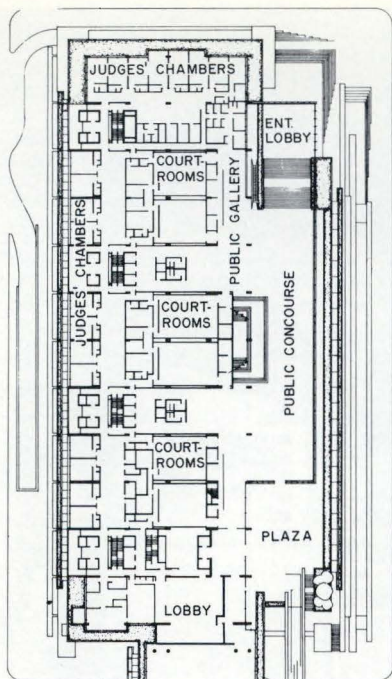
A WALK THROUGH ROBSON SQUARE

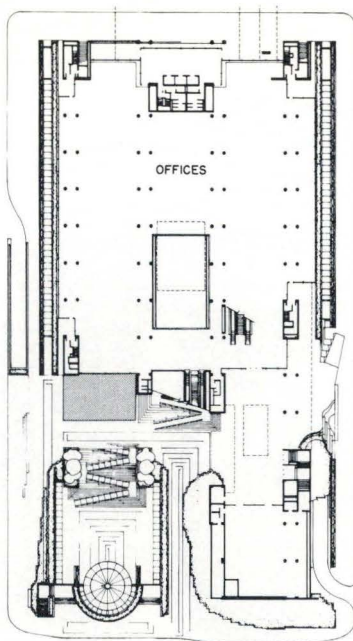
As the plans and the overview demonstrate, Robson Square contains three inter-related structures: the Vancouver Art Gallery, the Provincial Government Office Block and the Law Courts. These are integral to a multi-level plaza and garden through which two thoroughfares pass. Indeed, the Office Block is designed in such a way that it is itself a terraced open park. It is adjacent to or actually contains many of the facilities that are essential to Robson Square's overall function as a civic centre.

All the roofs of the office block have been landscaped, and most areas within it are accessible to the public, either above or below the level of the streets that transect the square. The public focus of this building-cum-plaza is the area surrounding Robson Street between Hornby and Howe, the area nearest the VAG. Close to the free public skating rink that is positioned under the two plexiglass domes situated below Robson Street is an international food mart that opens onto a plaza. Immediately adjacent to it within the portion of the office block that is constructed beneath Robson Street is a media centre that is equipped with a theatre, conference areas and exhibition spaces.

The government office block portion of the complex is set back 150 feet from Robson Street and gradually steps up to a maximum of three storeys at the Smithe Street end of the complex. There is a maximum of three storeys below street level, including service spaces. Within the structure there are open-plan offices accessed by street-like corridors. The interiors are landscaped in order to provide attractive office environments and to continue, inside, the park-like setting. The interior planning was designed by British Columbia Buildings Corporation (BCBC) on the principle of office landscaping.

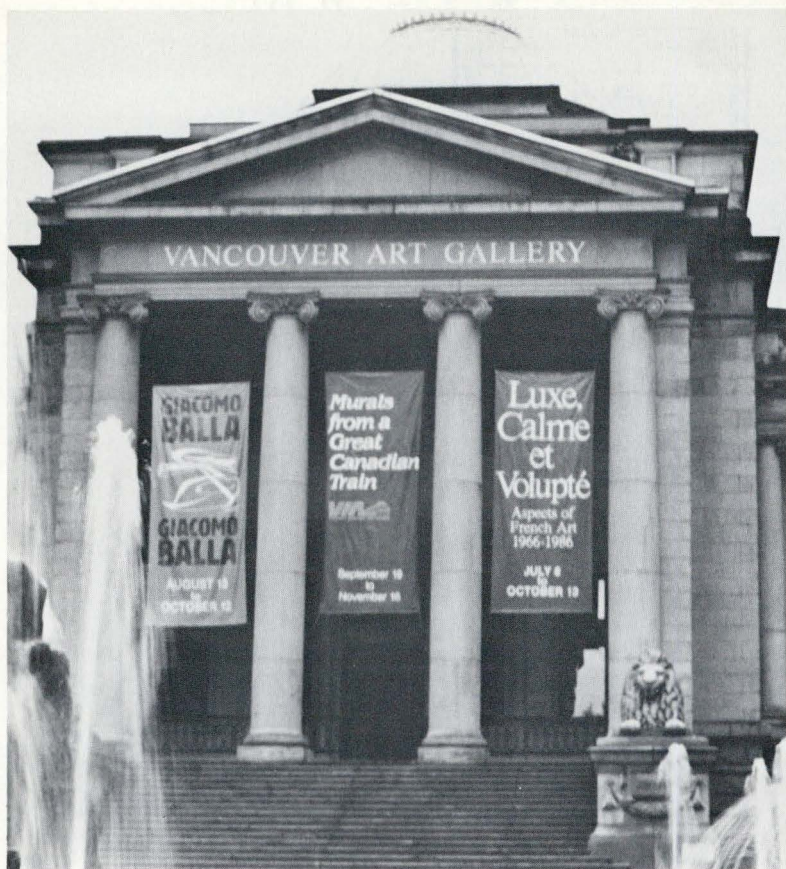






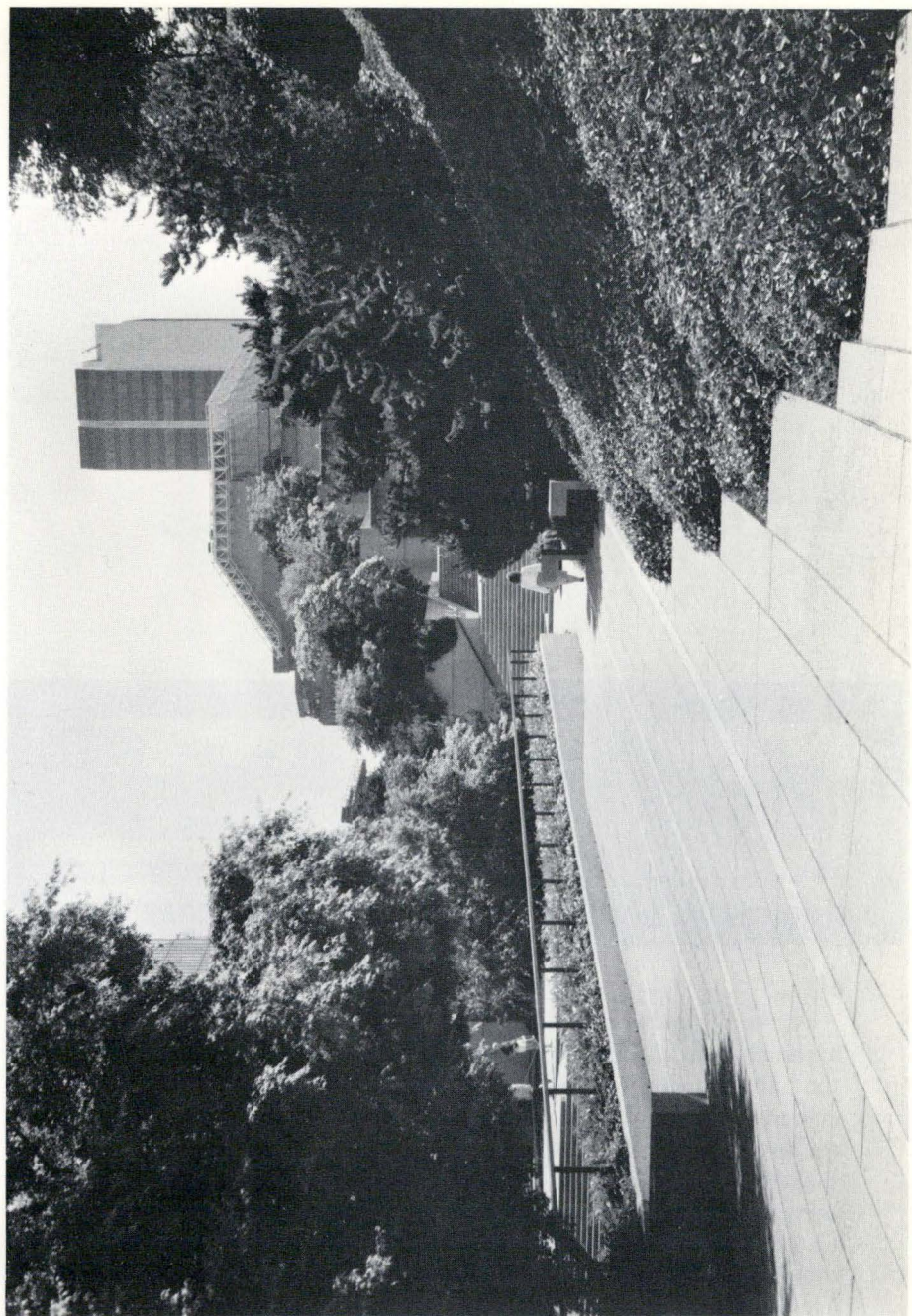
It is important to know that, as originally planned (and for a year or two after Robson Square opened), all but essential traffic was prohibited on Robson between Hornby and Howe. This allowed the square to function as the pedestrian precinct it was designed to be. And this closure made it easier to use the route that brought one most efficiently from the Hornby Street side of the Vancouver Art Gallery to the street-level causeway across Robson. That route is still accessible, even though Robson Street is now open to traffic, and it is the ideal one to pursue in order to perceive the way in which the Law Courts complex was to be experienced not only as a walk that would ultimately bring one via steps down to Nelson Street, but also as a civic amenity that would provide several services. On the whole site, there are many exhilarating routes to pursue.

* * *



The Vancouver Art Gallery's West Georgia Street facade is the logical beginning of the Hornby Street side progression through the Square. Although Rattenbury's structure (and its Hooper wing addition) have been converted into new gallery premises, the exteriors retain their Renaissance Classical appearances and, as such, evoke reminiscences of precedents as ancient as the Athenian Acropolis or as modern as the Metropolitan Museum of Art in New York.

As he walks along Hornby towards Robson Street, the spectator passes by one of the Gallery's two major entrances. When Robson Street is gained, he sees before him, just to the left of the intersection he must cross, an obvious path that invites him forward through the complex.

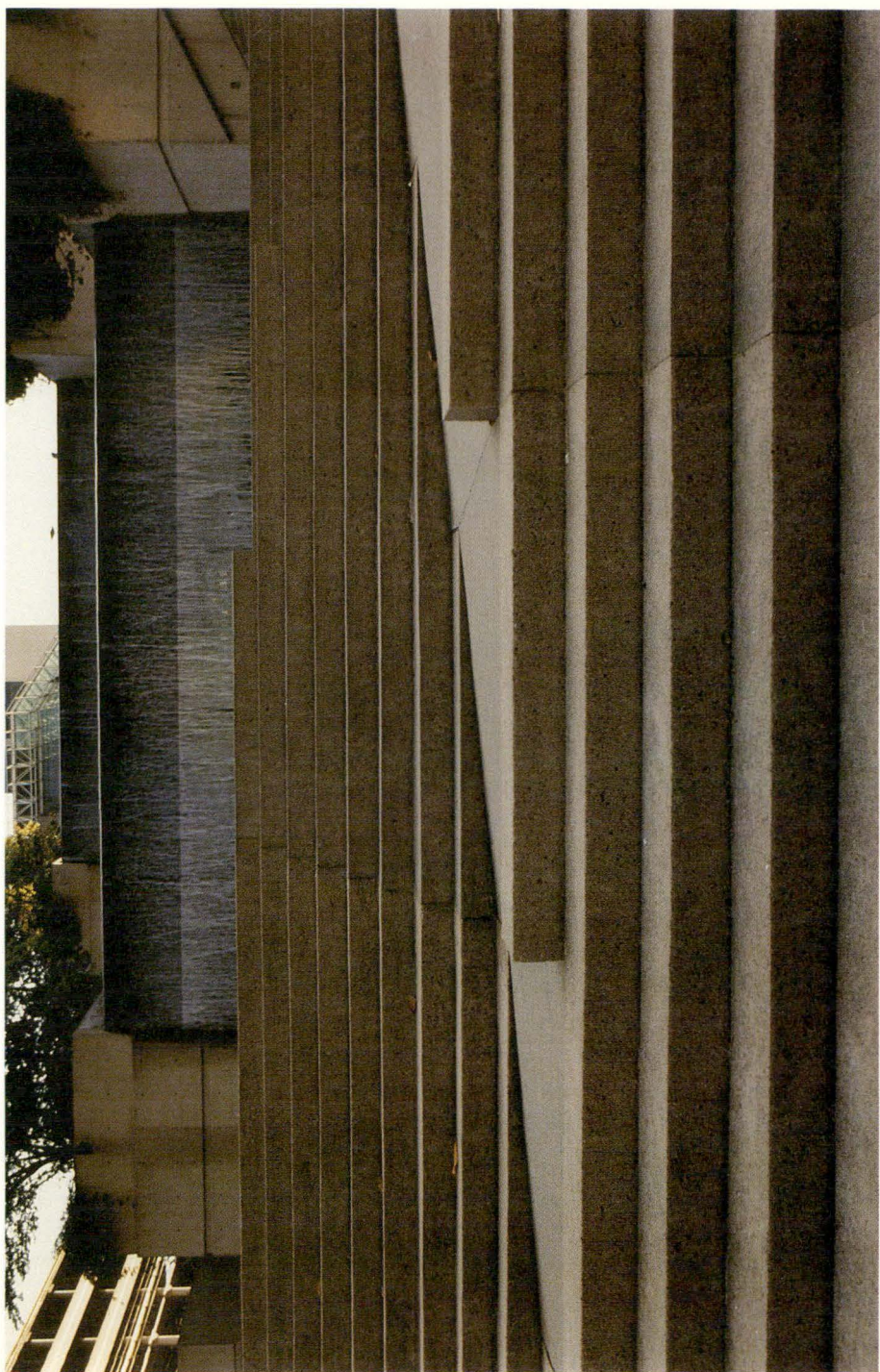




At the beginning of this path, a substantial part of the architecture is concealed from view by shrubbery. Some steps along the path, however, a view of the Courthouse surmounting an elaborate system of ramps and steps is presented. Further along still, the spectator has the impression that the Law Courts have shifted to the left and that they are about to disappear visually below the horizon of the stairs. Further, from this vantage point the upper waterfall also threatens to vanish behind the lower. The steps and ramps, which recall the plazas and temples of the Egyptians and Mayans, entice the walker forward to climb up to inspect the first cascade.







This close view of the first falls reveals to him that he is not simply looking at a pleasure-giving landscape feature, but also into the interior of an office building whose lower floors he has crossed up and over without being conscious of that fact. More steps and ramps soon lead him to the second torrent which, like the first, flows over windows of interior rooms. He pauses then to inspect the second reflecting pool. He can see that its glass bottom is the roof of a subsurface hall. When he mounts the steps to the right of this waterfall, the Law Courts will no longer be visible to him.

Soon, however, the pedestrian is located in a causeway similar to the first one he gained after crossing Robson Street. To his left, clearly visible, is the clerestory of an office block. He stands now on a bridge that will carry him over Smithe Street along the side of the Law Courts structure that is integrated with the government office block by virtue of an extended concrete beam positioned over a clerestory continuous with the first. The glass-roofed structure towards which he has been climbing is now fully visible. It is a contemporary Crystal Palace, a covered garden through which to walk. It is a foyer which gives him access to the courts in which he, as citizen of or visitor to this country, may sit as witness to trials in progress.





Within the foyer near the entrance he will discover Jack Harman's bronze figure of Themis. She is the climax to the walk he has experienced and is the graceful symbol of justice, the purpose of the Law Courts.

* * *

As originally planned, this glass-roofed foyer was to have been publicly accessible twenty-four hours a day as part of a pedestrian way that concluded at the Nelson Street boundary of the Square. Shortly after the complex was opened in 1980, the foyer was closed for security reasons when the courts were not in session. Therefore, this portion of a most important walkers' route through the entire length of the complex on the Hornby Street side cannot be used in the late afternoons, the evenings or on weekends as envisioned.

This closure, in tandem with the reopening of Robson Street to traffic between Hornby and Howe, has made it almost impossible for the casual visitor to grasp that this walk is the one that takes him along a conceptual spine of the Square. Further, the fact that the Law Courts' foyer is open only during regular business hours allows fewer people than was hoped to pass through this imposing space at leisure.

Relatively few people are aware that the lobby, which AEA calls the Great Hall, was conceived of as a space in which ceremonies and performances could take place after hours and on weekends. If considered in the right fashion, the Law Courts can be understood as a place for education and recreation, a parallel to the media centre within the Provincial Office Block.

* * *





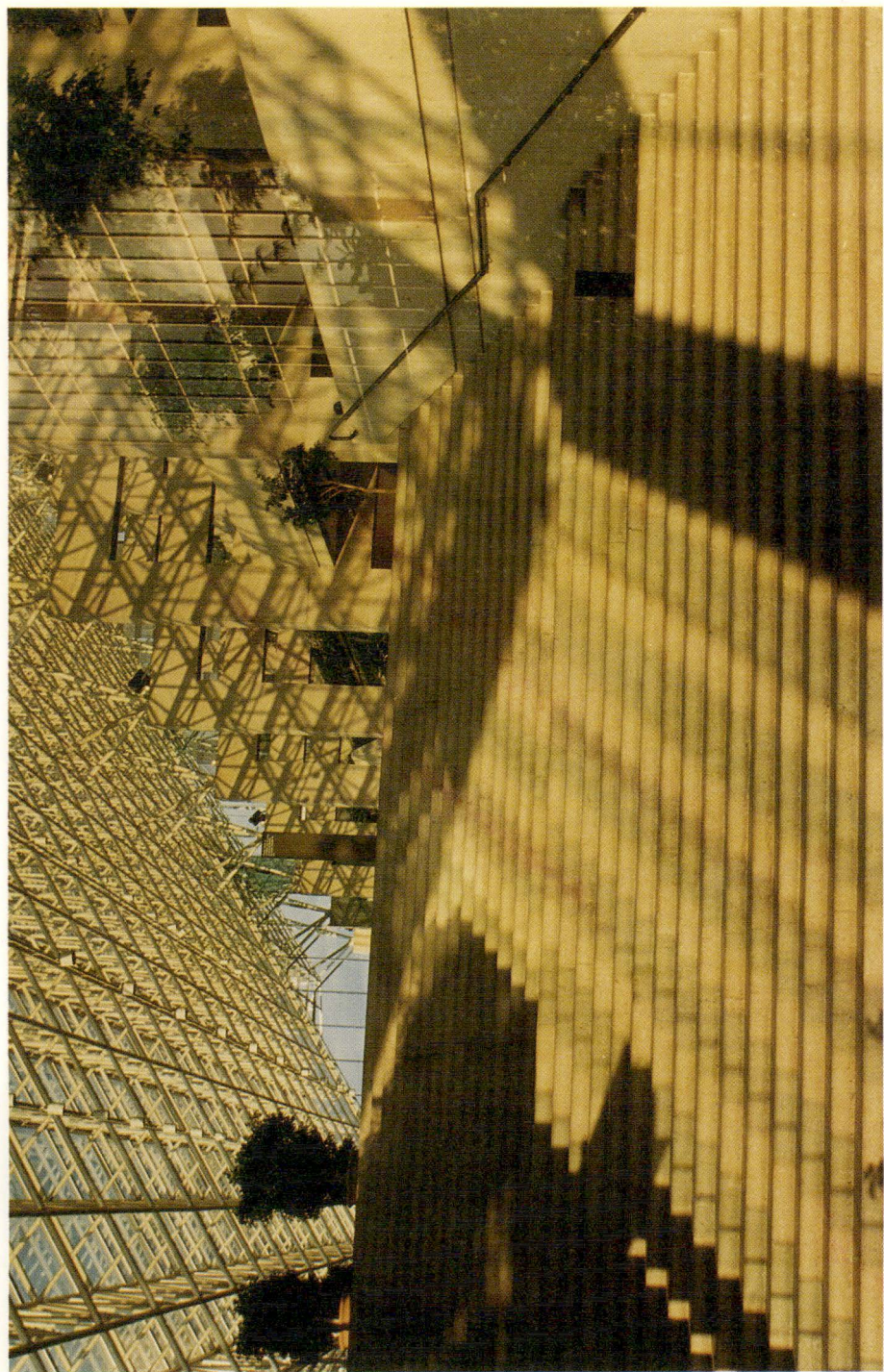
When Arthur Erickson Architects embarked on the Robson Square project, many people, despite the Vietnam War, despite nuclear threat, were still able, somehow, to take an optimistic view of human nature and of the institutions that symbolize North American and British democratic processes. Erickson, himself, at that time and still, has a desire to create monuments that will elevate the human spirit and put the citizen in touch with a carefully orchestrated urban site and, through landscaping, with nature. These are the lofty concerns which are materialized in Robson Square. But by the time the Law Courts opened in 1980, instances of terrorism in public places, at home or abroad, were escalating. It was becoming more difficult to imagine that such old-fashioned virtues as respect would prevent acts of major vandalism or the wanton destruction of public institutions. Hence it is sensible, but regrettable, that the Law Courts building is now more secure than it might have been.

* * *

The Great Hall, which was designed as a major civic space that invited public awareness and involvement in the process of justice, is complementary to the courts adjacent to it in this space. The main courtrooms are stacked in the four storey high interior of the glass roofed lobby. They are approachable via a system of ramps, steps and elevators. Plantings cascade from the balustrades. The courtrooms are warmed by wood and by strong single-colour carpets and upholstered seats.

The Law Courts building is organized into four major components: public space, courtrooms, judges' chambers, and administrative and support facilities. In all there are thirty-nine courtrooms provided with necessary special areas for jury and judge retirement and for witness interview. Sixty judges are accommodated within this edifice. There are libraries and a barristers' lounge. The administrative facility provides space for the court registry and the sheriff's department. There is provision, too, for court reporters, security control and detainees.

* * *





A visitor is welcome to inspect not only the many rooms and chambers within the Law Courts, but also most of the offices and recreational spaces within the Provincial Government Office Block. He should descend to the main floor of the office block and walk through that structure in the direction of Robson Street. He will discover a four storey high inner court covered by a glass roof over which water flows. This area is richly planted. Full grown trees shade those who sit at tables to talk, to read, or to watch the play of the shadows of foliage and water ripple over the concrete revetments. This is the interior space under the glass-bottomed reflecting pool of the highest waterfall on the site.

The visitor will then pass by open office spaces arranged on either side of the plant-lined avenues that lead him out onto the main plaza of Robson Square. There he might be tempted to eat at the international food mart. He might see a display in the media centre's court, a space designed as one complementary to the tree-filled court in the office area. Or he might walk underneath the dome of the rink, then under Robson Street itself in order to climb the stairs to the main entry of the Vancouver Art Gallery. If he had visited this gallery in September 1986, he would have discovered the Rotunda transformed by an installation work by France's Daniel Van Buren.

* * *



A visitor might encounter Robson Square to enjoy the culture offered by the Vancouver Art Gallery, to explore the city's central square, to enquire after travel information at the BC Tourism office, to obtain a business licence at the government offices, to deal with a legal problem, or to serve on a jury. The complex was designed, however, in the hope that people would come most often to the Square because of the recreation it provides, walk, to talk, to read a book, catch a snooze, get a tan, have a snack. It is a place to enjoy. It is also a place in which to learn. In addition to the programmes the VAG offers, there are art and business displays, conferences, films and dramatic productions booked into the Media Centre. A visitor may also wish to view trials in the Law Courts. Robson Square is also there, however, to be experienced and appreciated as a major work of architect and city planning.

While there are some technical and user criticisms of Robson Square because of the recreation it provides, to walk, to talk, to read a book, to catch a snooze, to get a tan, to have a snack. It is a place to enjoy. It is also a place in which to learn. In addition to the programmes the VAG offers, there are art and business displays, conferences, films and dramatic productions in the Media Centre. A visitor may also wish to view trials in the Law Courts. Robson Square is also there, however, to be experienced and appreciated as a major work of architecture and city planning.

* * *







To know that Arthur Erickson is well travelled and an admirer of the work of Frank Lloyd Wright is essential to an appreciation of his work. Erickson did not become an architect until he returned from the East, having served in the Canadian forces during World War II. After seeing the first publication of Frank Lloyd Wright's Taliesin West (Arizona), he decided to become an architect. Those familiar with that house will realize that its glass-roofed studio is arranged in a fashion that recalls the Law Courts' Great Hall. So intrigued was Erickson by Wright that he visited him at his other home, Taliesin East (Wisconsin). That home, the design of which inspired many houses and complexes Erickson would build in future, was a skilful interconnected array of architectural and landscape elements composed as an unfolding surprise.

Although he had a chance to study with Wright, Erickson was advised by the Director of McGill's School of Architecture not to accept the offer. He was encouraged instead to finish his academic studies so that he could win a travelling scholarship. Erickson stretched the scholarship money to cover a two and one-half year period of self-education in western architectural history, tracing its development from its Middle-Eastern beginnings to Greece and beyond, then forward to Western Europe and England, a fact that has allowed his buildings to be rich in allusion. The great monuments of the past and the work of Frank Lloyd Wright have provided Erickson with insight into methods of composing architectural and environmental features (found, augmented and planted) into imposing sites. This gift has been evident in most of his works on a small or large scale. It is particularly evident at Simon Fraser University which he designed in 1963.

Ten years after his scholarship trip, Erickson began a special study of the art and architecture of Japan which led to the writing of serious architectural philosophy and which contributed depth to several commissions executed in that country. Recent travels have taken him to South East Asia, Africa, China, South America, and the Middle East. Arthur Erickson Architects has now long been an international firm with offices in cities around the world.

WORKS CITED

- Archives. Arthur Erickson Architects. Vancouver, BC.
- Barret, Anthony A. and Rhodri Windsor Liscombe. *Francis Rattenbury and British Columbia: Architecture and Challenge in the Imperial Age*. Vancouver: U of British Columbia P, 1983.
- British Columbia Department of Public Works, General Correspondence File. Provincial Archives of British Columbia, Victoria, BC.
- British Columbia. Specification for a Court House, Vancouver, BC, May 1907. City of Vancouver Archives, Vancouver, BC.
- First Congress of Canadian Architects and First Annual Convention of the Institute of Architects of Canada: Montreal, August 19, 1907*. Montreal: La Patrie, 1907.
- "From the Pages of History." *Province* [Vancouver] 7 Mar. 1974.
- Kalman, Harold. *Exploring Vancouver: Ten Tours of the City and Its Buildings*. 2 vols. Vancouver: U of British Columbia P, 1978.
- Kloppenborg, Anne et al. *Vancouver's First Century: A City Album*. Vancouver: Douglas, 1977.
- Nichols, Marjorie. "NDP Won't Build 55 Storey Tower." *Vancouver Sun* 6 Oct. 1972.
- Ormsby, Margaret. *British Columbia: A History*. Vancouver: MacMillan, 1958.
- Reksten, Terry. *Rattenbury*. Victoria, BC: Sono Nis, 1978.
- Whiteway et al. *Modern Architecture*. Vancouver: n.p., 1911.

SUGGESTED FURTHER READING

- Arthur Erickson: Selected Projects 1971-1985*. New York: Center for Inter-American Relations, 1985.
- Buchan, Anna. "Putting Art in Its Place." *Vanguard* 12 (Oct. 1983): 26-37.
- Erickson, Arthur C. *The Architecture of Arthur Erickson*. Montreal: Tundra, 1979.
- Hotson, Norman. "Simple Elegance." *The Canadian Architect* 29 (Mar. 1984): 28-33.
- Nairn, Janet. "Vancouver's Grand New Government Center." *Architectural Record* 12 (Dec. 1980): 65-73.

PROJECT CREDITS

ROBSON SQUARE (A THREE BLOCK PROJECT)

Vancouver, British Columbia, 1973-1983

Designer: Arthur Erickson Architects, Vancouver

Client: British Columbia Buildings Corporation

Project Chairman: Dr. Gordon Shrum

Architects: Arthur Erickson Architects

Planning Co-ordinators: Bing Thom, Rainer Fassler, Jim Wright

LAW COURTS: BLOCK 71

Principal Architect: Arthur Erickson

Project Architect: Rainer Fassler

Project Team: Nick Milkovich, Ron Beaton, Barry Simpson, Eva Matsuzaki, Roger Morris, Allen Cheng, Eddie Maifredi, Kirat Anand, Arthur Yesaki, Bob Bida, Tom Robertson, Shanti Ghose

PROVINCIAL GOVERNMENT OFFICES: BLOCK 61

Principal Architect: Arthur Erickson

Project Architects: Junichi Hasmoto, Jim Wright

Project Team: Randolph Jefferson, Yasuo Murumatsu, Eva Matsuzaki, Jim Cheng, Arthur Yesaki, Bob Bida, Tom Robertson, Shanti Ghose

Urban Design: Alan Bell, Dennis Christianson

Landscape: Cornelia Hahn Oberlander, Raoul Robillard, Ken Morris, Robert Zinser

Structural: Bogue Babicki & Associates

Mechanical: Reid Crowther & Co.

Electrical: W. T. Haggert & Co.

Lighting: William Lam Associates Inc.

Acoustical/Audio Visual: Bolt Beranek and Newman Inc.

Life Support Systems: Rolf Jensen & Associates, Inc.

Glazing: Eugene O. Tofflemire Associates

VANCOUVER ART GALLERY: BLOCK 51

Client: City of Vancouver Civic Buildings Department

Principal Architect: Arthur Erickson

Associate-in-Charge: Eva Matsuzaki

Project Architect: Noel Best

Project Team: Konhee Ho, Tom Robertson, Barbara Shapiro, Arthur Yesaki, Sandy Trewin

Landscape: Cornelia Hahn Oberlander

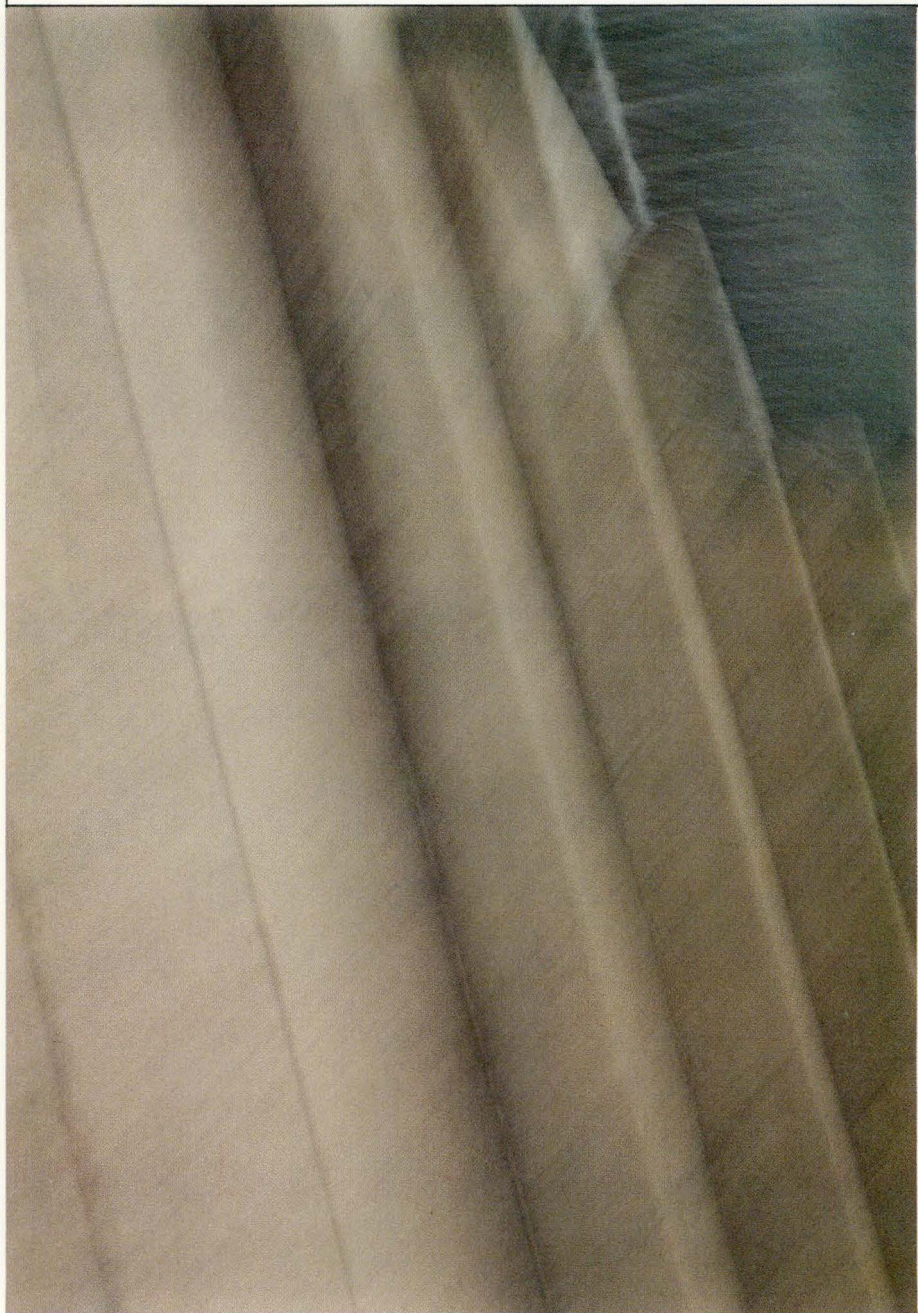
Structural: Bogue Babicki & Associates

Mechanical: Mechanical Consultants Western Ltd.

Electrical: R. J. Wong & Associates

Lighting: Incorporated Consultants Ltd.

Project Management: J. D. Bibby Management Ltd.



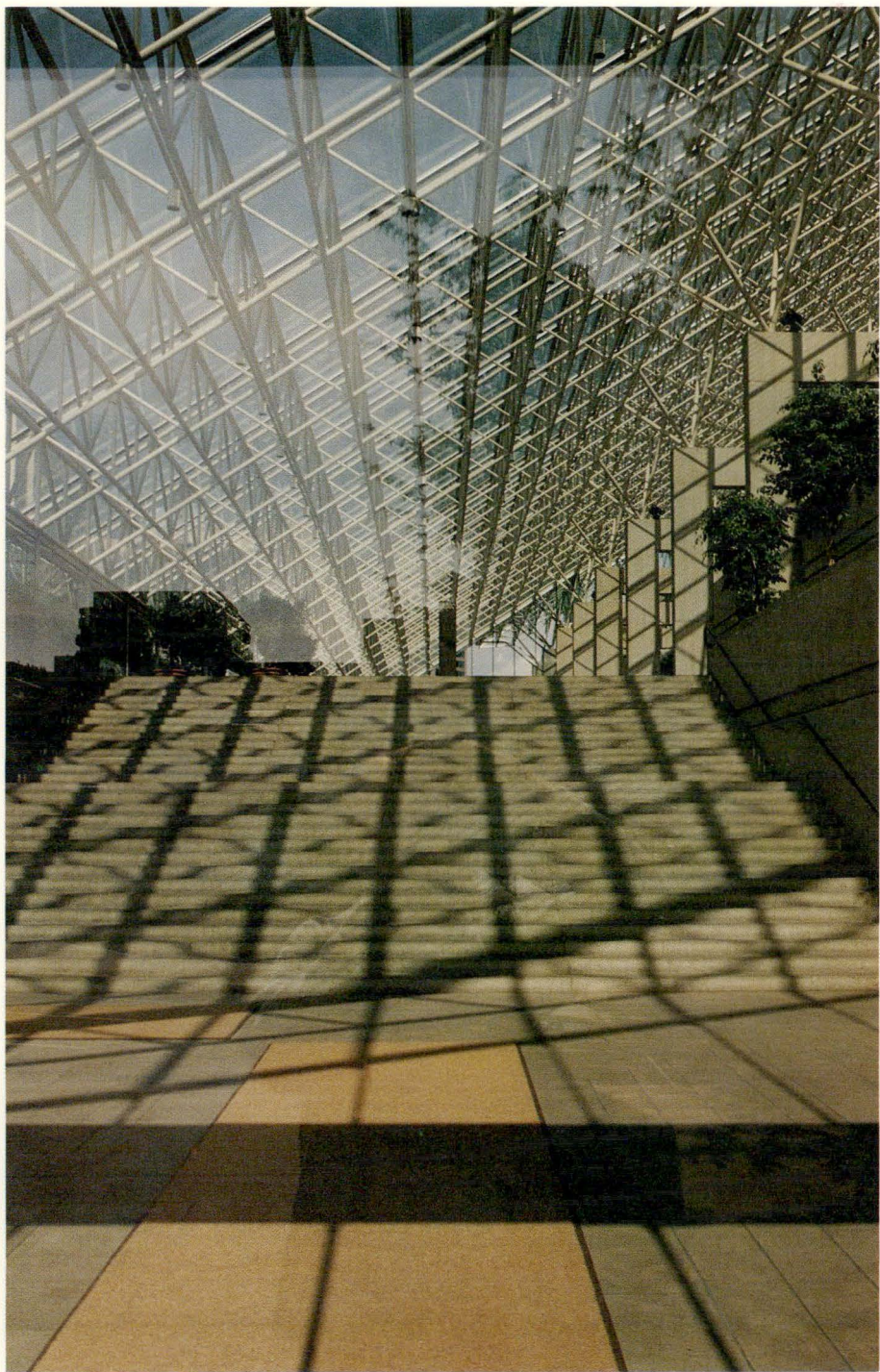
ETE POEM





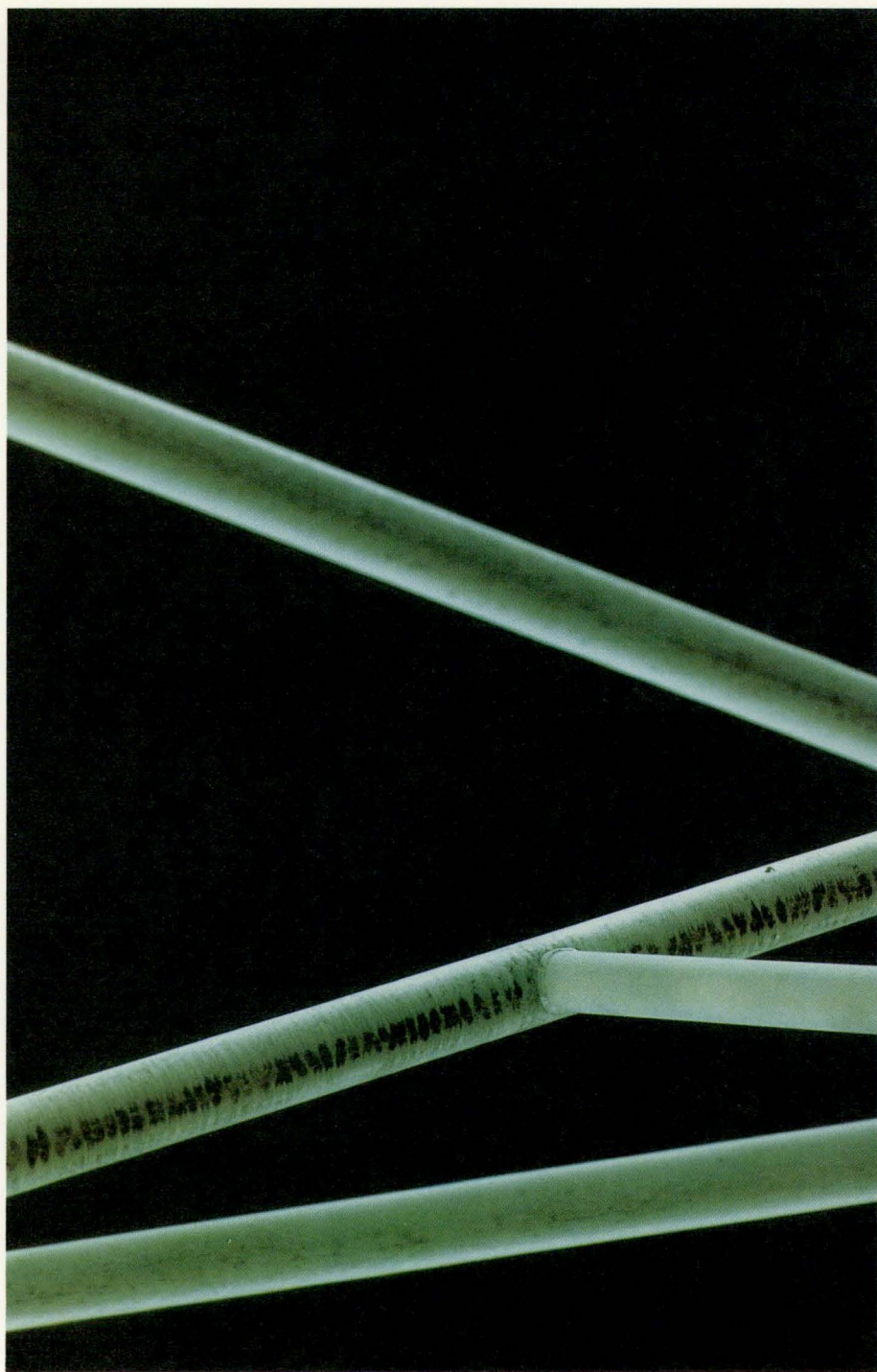












IMAGES

PAGE

83	Vancouver Art Gallery.
84	Vancouver Art Gallery.
85	Vancouver Art Gallery.
86	Arthur Erickson Architects.
88 & 89	Nathan Hohn.

IMAGES

PAGE

91	Vancouver Art Gallery.
92	Arthur Erickson Architects.
93	Arthur Erickson Architects.
94	Ann Rosenberg.
95	Michael Smart.
96	Michael Smart.
97	Jan Koot.
98	Robert G. Sherrin.
99	Robert G. Sherrin.
101	Jan Koot.
102	Robert G. Sherrin.
104 & 105	Jan Koot.
107	Jan Koot.
108	Robert G. Sherrin.
110	Ann Rosenberg.
112	Jan Koot.
113	Jan Koot.
114	Ann Rosenberg.
118	Robert G. Sherrin.
119	Robert G. Sherrin.
120 & 121	Robert G. Sherrin.
122	Robert G. Sherrin.
123	Robert G. Sherrin.
124	Robert G. Sherrin.
125	Jan Koot.
126	Jan Koot.

ACKNOWLEDGEMENTS

This project began in 1979 when I was on sabbatical leave from Capilano College. A manuscript draft for a book on the history of public and commercial buildings in Vancouver was prepared at that time. The first chapter of *Layers* is called "From the Old Courthouse to the New." Two other chapters in *Layers* also feature the works of Arthur C. Erickson.

In 1979 AEA allowed me to use any or all of the records pertinent to my research, and Alan Bell kindly supplied necessary oral history. In my updating and expanding of chapter one for publication as *TCR's Robson Square* monograph, again AEA was entirely generous in its support. Alan Bell refreshed my memory of our previous conversations. Noel Best, who was the designer and Project Architect for the Vancouver Art Gallery, provided me with invaluable assistance in writing the section that deals with the transformation of the Old Courthouse.

Michael Smart, Student Associate Visual Media Editor of *TCR*, contributed energy and advice and took the sequence of photos that show a route across the Square to the Law Courts. Robert G. Sherrin (see *TCR* #37) extended his Walkers series for our use. Jan Koot took the photographs of Robson Square's magnificent gardens which were designed by Cornelia Hahn Oberlander. Several photographs by Nathan Hohn who worked with me years ago are also part of this text, as are others which the Vancouver Art Gallery have provided for our use.

I wish also to thank the City of Vancouver Archives, the Provincial Archives of British Columbia, the Vancouver Public Library, and UBC Press for permitting the publication of many essential materials. Finally I am grateful to Dorothy Jantzen, Editor, for her careful attention to details and for her unflagging interest in this project.

ANN ROSENBERG, Visual Media Editor, *The Capilano Review*

\$7.00

ISSN 0315-3754

Coming Next

journal writing by SHEILA DELANY

fiction by DAPHNE MARLATT

an interview of
Marlatt by ELEANOR WACHTEL

If you wish to subscribe to this magazine, please forward your name, address and postal code number to *The Capilano Review*, 2055 Purcell Way, North Vancouver, B.C. V7J 3H5. Tell us the issue number with which you would like to begin.

Rates for individuals are: \$12.00 for 4 issues (1 year); \$22.00 for 8 issues.

Libraries: \$14.00 for 4 issues.

THE CAPILANO REVIEW